Remarks ON MODERN LITHOTRITY.

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My object in the present communication is to show in what the modern operation of lithotrity consists, and to explain the instruments which have made its performance possible; for the removal of a vesical calculus through the urethra is now mainly a question of apparatus of which certain essential details are new. And as it is by no means necessary that the different parts of the apparatus should be put together exactly in any particular manner, it will be perhaps better to illustrate the principles of its construction than to insist on any special form of it. It will also be unnecessary for me to dwell on those parts of the subject which belong as well to the old lithotrity as to the new.

From the days of Civiale to the year 1878 there was little change in the operation. The duration of a sitting was as brief as the skill of the surgeon, stimulated by his fear of producing cystitis, could make it. Three minutes or less was the limit inculcated by standard books and the teaching of specialists, and the use of anæsthesia was exceptional.

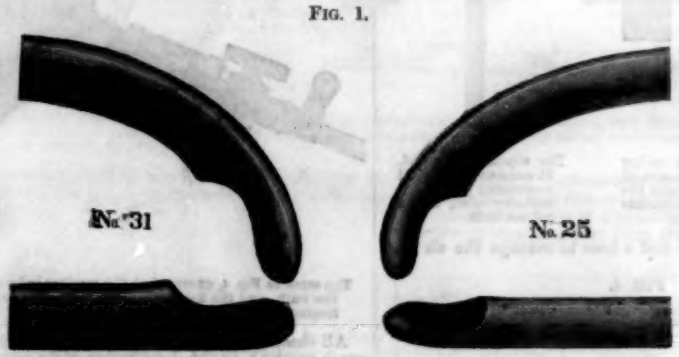
Assuming all this to be admitted, let us examine the rest of the apparatus, and see how the operation is modified by it. As even a single minute fragment left in the bladder may be the nucleus of a future stone, it is important to get rid of it with certainty, and once for all. Now, although a fragment remaining in the catheter, after the bulb has ceased to expand, goes back to the bladder, yet if it has once passed beyond the catheter its return to the bladder ought to be made impossible—the surgeon should be able to secure it. And yet no evacuator hitherto devised, whether with a long or a short connexion between the bulb and the catheter, accomplishes this important end. They all inject fragments from the apparatus back into the bladder. I find by experiment that a few added inches of elastic tube make little difference. *It is from the bulb or bottle that fragments are chiefly returned, before they settle into the receiver, and not from the tubes.*

To prevent this I have fixed a simple contrivance to the head of the catheter, which is absolutely effectual in securing every fragment as it comes through it (Fig. 2). It consists of a small light glass cylinder, containing a ball-valve of rubber acting noiselessly, the valve seat of which is perforated so as to strain the return current and to keep back any fragment that has once passed it. Such a *catheter-valve*, or *strainer*, to which I alluded in my first paper (1878), is, I think, nearly as important as the large evacuating catheter itself, of which it may indeed be considered as a part.

The rest of the apparatus admits of endless variations, which are less important.

If to the essential large catheter and trap we merely attach a strong elastic bulb, we have an excellent and simple instrument for a short washing or for sounding for a last fragment.

FIG. 1.



Large and small evacuating catheters, straight and curved (Nos. 25 and 31, French).

At present anæsthetics are the rule. The instruments have been already modified in an important manner, while sittings often last half an hour, and have been successfully extended to three hours and more.

Had Clover (whose catheter had a calibre only 21 of the French standard—about 12 English) or Mercier employed larger catheters (between 25 and 31 French—15 to 20 English), they might have evacuated the bladder completely. They would have found how little affected it was by a long operation if no fragments were left behind, and that polished instruments were not injurious to it while sharp fragments were. They would have discovered a *tolerance on the part of the bladder* wholly at variance with the traditions of half a century. Upon this tolerance modern lithotrity is based.

The new and essential instrument of the operation is *the large catheter* (25 to 31) whether straight or curved (Fig. 1). This is indispensable. It has an orifice at the extreme end, one side of which is prolonged so as to make its introduction easy. It has been adopted with little or no change, so far as I know, everywhere. Although my first apparatus was provided with efficient means of suction and a detached trap, neither of which was used before, its distinctive feature was the large catheter. The small size of the previous evacuating catheter delayed surgical progress for half a century. All the fragments could not pass through it, and it was impossible for surgeons to ascertain how the bladder would behave when once completely emptied of all fragments.

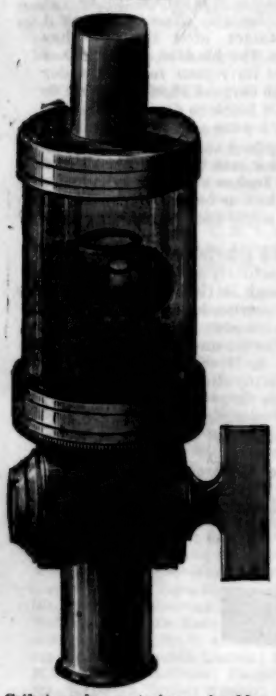
I have called this an evacuating sound (Fig. 3). No fragment drawn by it from the bladder can get back. This apparatus resembles Clover's, which was the first of the straight variety. It differs from it in having a large catheter, a valve or strainer, and a stiff bulb, all of which are either necessary or important to success.

One of the early additions to my own first instrument with which, in its original form, Thomas Smith successfully evacuated nearly two thousand grains of débris, was a hose. This contributes greatly to the convenience of the operation. When, for example, at each aspiration of the bulb, the wall of the bladder is drawn with a painful jerk, or series of jerks, into the orifice of the catheter, evacuation is obstructed. More water is then needed to distend the walls. This is conveniently supplied by a small hose attached to the top of the bulb (Figs. 4, 6, 7). Should the patient strain or vomit, and the bladder be forcibly distended in consequence, we have here a means whereby the superfluous water can be quickly removed from it. When air rises to the top of the apparatus from the empty catheter or a leaky joint, it can escape by this hose and be replaced by water. Valves in the hose itself, or in the vessel into which it delivers, allow the bloody water to be changed for fresh. By its means the amount of water can be regulated, and the operation becomes a dry one, while the apparatus is as simple as a common enema syringe.

I have made a convenient straight evacuator out of the evacuating sound by attaching to it a light receiver, like

that of a breast-pump, close to the catheter, adding also a flat strainer[1] (Fig. 10) at the entrance of the bulb, to keep

FIG. 2.



Catheter-valve or strainer. A rubber ball, acting as a valve, has a seat of perforated metal, which strains the water. It prevents the fragments which pass it from returning.

FIG. 3.

The evacuating sound. It consists of a small evacuating catheter, a catheter-valve, and a rubber bulb.

the fragments out of it, and a hose to manage the air and water (Fig. 4).

FIG. 4.

A straight evacuator, made from the evacuating sound, by adding, below the valve, a glass receiver to hold the fragments, and above the bulb a tap for the hose. Between the valve and the bulb, inside, is a flat strainer (not seen) to keep the fragments out of the bulb.

[1] The strainer, new in the evacuator, is susceptible of a variety of application and of form. A long narrow slit in the tube answers as well as the perforations.

The same arrangement is here also shown (Fig. 5) in metal instead of glass.

FIG. 5.

he valve and trap of Fig. 4, made of metal.

In Fig. 6 the glass receiver has been transferred from the neighbourhood of the catheter to the position it occupied in my first evacuator, below the bulb, to which the fragments are now, of course, admitted, by removing the flat strainer.

FIG. 6.

The same as Fig. 4, except that the receiver is here transferred to the bulb, and the flat strainer has been removed to admit the fragments to it.

All these are varieties of the straight apparatus. This is much the best, in the distribution of its parts, of the evacuators wholly supported by the hand. The centre of the bulb is in line with the catheter, and were it not so heavy when full of water it would be a most convenient handle for the management of that instrument.[2] In short, if the operator prefers to carry the bulb, unsupported in his hand, straight instruments, such as have been described, are the best. But I prefer a support or stand of some sort. If a flexible tube or joint is interposed between the bulb and the catheter, the former can be supported upon the patient, or on a stand at a height corresponding with the inclination which the prostate gland gives the catheter, while the latter has a free and independent motion. Such is the instrument I use for any considerable evacuation (Fig. 7).[3]

It is no great matter where the catheter enters the wall of the bulb, but it should finally deliver inside at some point lower than the top, so that any air can rise out of the way.

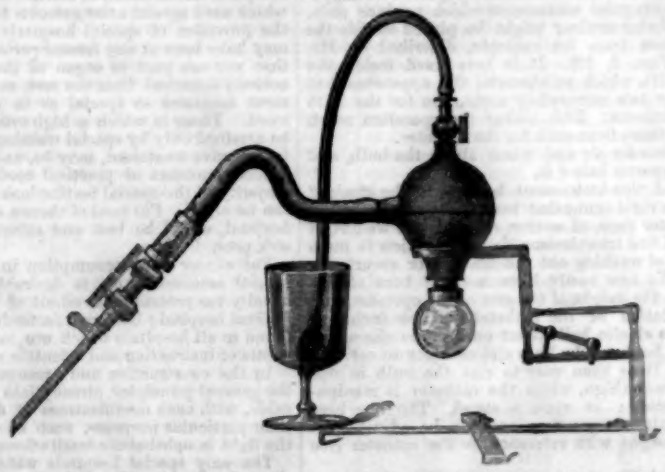
[2] By a straight instrument is here meant one in which the catheter and bulb are fixed in line rigidly, so that one cannot move without the other. If the bulb, still retaining a metal connexion, were bent down out of this line, it could be supported on the patient or the table. But when it is bent up and attached inflexibly, it seems to me more difficult to manage. It is then neither so convenient for the operator to support its weight, nor is it easy to keep the catheter from oscillating. The rigid short connexion seems to have been adopted in the hope, by shortening their route, of preventing a return of fragments. It fails to do this, because most of the fragments come, not from the tubes, but from the bulb.

[3] The mobility of the bulb in a stand can be provided for in a variety of ways—by making a ball-and-socket joint of the spherical bulb and a ring (Fig. 7), or of its glass receptacle (Transactions of the Clinical Society, London, 1879, and Boston Medical and Surgical Journal, January 1st, 1880). The bulb can also be hung from a crane.

Mr. Berkeley Hill was quite right also in saying that the catheter should not deliver into a narrow part of the apparatus where fragments are crowded together, because then they go back to the bladder. It is the worst place, although if a valve or strainer is used the defect is less important.

But let me repeat it, a proper catheter to deliver the fragments with an effectual contrivance to prevent their return, are the essential parts of the new apparatus; the rest is a matter of convenience or perfection, and every operator can choose the arrangement which suits him best. *When the instrument is imperfect, the fragments will go backwards and forwards; but they always leave a certain number out-side. The evacuation will be accomplished in the end by every evacuator that has the large catheter, which is the key to modern lithotrity.*

FIG. 7.



A complete evacuator, used by the writer, being the same as that represented in Fig. 5, with the addition of a stand and an elastic tube. Curves in the elastic tube make it less liable to flatten when bent. The hose is attached when it is needed.

FIG. 8.

The "Simplified Evacuator" and Stand. The catheter is prolonged, by a long tubular strainer, into the bulb. This makes a catheter-valve, though still advantageous, less necessary. An elastic ball or universal joint, with a small tubular strainer, is also substituted at the head of the catheter, for the elastic tube, and makes the instrument shorter. The stand is here a retort stand. The bulb hangs firmly in a fork (separately figured), and can be variously inclined.

What has been said about the evacuator, an instrument which has been of late years so modified as to make it a chief factor in the operation of lithotrity, is intended rather to illustrate the principles which should guide the surgeon in its construction, than to recommend any particular one. For although the instruments I showed at the Congress, and which I have described here, and use, accomplish the work of drawing out the fragments and preventing their return more perfectly than any previous apparatus for the purpose, this is not the only consideration which always in practice determines the surgeon in the choice of such an instrument.

I now recommend an evacuator on the ground of simplicity in construction and economy in price.[4] It works quite well enough with or without a stand. It is, in fact, the instrument already described, with a strainer substituted for the valve. Several instruments shown by me were provided with strainers, but this one is arranged with reference to the fact, that the return of fragments from the apparatus to the bladder is much greater from the bulb than from the tubes,

FIG. 9.

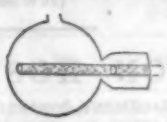
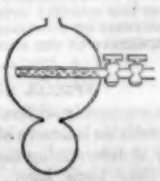


FIG. 10.

FIG. 11.



Diagrams intended to show how much a straight instrument is shortened by flattening the glass receiver (Fig. 10), or by removing it from the catheter (Figs. 4, 5, 9, 10) to the bulb (Figs. 6, 7, 8, 11). The space may be occupied by stopcocks. The body of the bulb is spherical, and lies in the axis of the catheter, with a hose and a receiver attached to it.

to which it has been erroneously attributed. The strainer is here a perforated cylinder added to the catheter, passing inside the bulb, and extending nearly across it. Through this the fragments are drawn into the bulb-cavity. They

[4] The aspirators here described, and also the various lithotrites, are made in this country by Messrs. J. Weiss and Son, London.

swirl there for a few seconds, but when the water goes back to the bladder it strains them off, and they fall into a receiver. The lengthened tube adds little to the amount of the returned débris, and if obstructed is easily cleared by a rod (Figs. 8, 11).

The apparatus here described has, with or without a stand, the following advantages:—

1. As the bulb is spherical whether a receiver is attached to it or not, the hand of the operator, grasping its centre, is in line with the catheter as if holding the handle of a long screw-driver, which is better than if the hand were above it, out of line. This is an advantage common to all straight evacuators.

2. The instrument is a short one. A long inflexible apparatus is liable to irregular movements which produce pain. Otherwise the tubular strainer might be placed outside the bulb (in the glass trap, for example, described by Mr. Berkeley Hill—Figs. 9, 10). It is here fixed inside the bulb (Figs. 8, 9, 11), which so shortens the apparatus that we have room for two connecting cocks, one for the bulb and one for the catheter. This makes the operation much drier than where there is no cock for the catheter.

3. There is a hose for air and water above the bulb, and a receiver for fragments below it.

Without a stand this instrument belongs to the straight evacuators with a rigid connexion between the catheter and bulb. The operator then, of course, supports the weight of the bulb, which I find troublesome if the operation is more serious than that of washing out the bladder or securing a last fragment. We can easily have a stand here steady enough to sustain the weight of the arm of the operator, and prevent the oscillation of the catheter. Three inches of elastic tube, or an elastic ball about an inch in diameter, can be interposed between the bulb and catheter to act as a universal joint.[5] It is then easy to rest the bulb in one hand on the patient's thigh, while the catheter is manipulated with the other; or upon a stand. The one here figured is of simple construction, and can be adjusted at any convenient height with reference to the catheter (see Fig. 8).[6]

I have condensed the arrangement here described from the materials referred to in the preceding part of this paper, having been lately persuaded that a compact and inexpensive apparatus, performing as perfectly as this one, is still a desideratum. To appropriately designate it, I have called it "The Simplified Evacuator." A stand and elastic joint can be had with it.

(To be concluded.)

ON HOSPITALS:

THEIR MANAGEMENT, CONSTRUCTION, AND ARRANGEMENTS IN RELATION TO THE SUCCESSFUL TREATMENT OF DISEASE, WITH REMARKS ON THE ORGANISATION OF MEDICAL RELIEF IN THE METROPOLIS.

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SPECIAL HOSPITALS.

THIS is an extremely difficult class to deal with, and so little that is reliable is known of many of them, as to increase the difficulty of determining their *raison d'être*. With a few exceptions, they have been unsparingly condemned by Dr. Oppert in his work on Hospitals, who thought that even then (1867) they had increased so largely in number, and in so alarming a manner, that it was high time for public attention to be directed to them, for as soon as they multiplied in such manner that for almost every disease one would be called into existence, they would become a nuisance and an absurdity. A list of those now to be found in London is contained in THE LANCET Map, published on July 16th.[1]

Some are undoubtedly needed in so large a city as London, for purposes of instruction and scientific research, and in dealing with classes of diseases for which adequate and fitting accommodation cannot be found in general hospitals. These are few in number, and regarding some of them, grave doubts are now entertained as to whether it is desirable to gather considerable bodies of sick in them, on the supposed ground of their danger to the communities in the midst of which they are placed.

The principle of construction of hospitals by subdivision, with detached and separate pavilions, which admit of a complete classification of disease, and the separation of those which need special arrangements for their treatment, render the provision of special hospitals less necessary, than they may have been at any former period. It is idle to suppose that any one part or organ of the human body can be so entirely detached from the rest, as to demand for its treatment measures so special as to require an institution to itself. Those in which a high order of mechanical skill, to be attained only by special training and practice, is essential for effective treatment, may be, and are, rightly constituted special branches of practical medicine; but for the great majority of the special institutions in existence, no such plea can be urged. For most of these a separate ward in a general hospital, would be best and safest in the interests of the sick poor.

For cancer and consumption in very large communities, special accommodation is desirable, because the cases are usually too protracted to admit of their occupying beds in a general hospital; but, even for such diseases, room should be found in all hospitals which are in any way used as instruments of instruction and scientific research.

In the construction and arrangements of such hospitals the general principles already laid down are strictly applicable, with such modifications of detail as are required for their particular purposes, such as the careful regulation of the light in ophthalmic institutions, &c.

The only special hospitals which demand separate consideration are fever and small-pox hospitals, and lying-in hospitals.

FEVER AND SMALL-POX HOSPITALS.

It would obviously be out of place, and is unnecessary, to discuss the exact nature, origin, and mode of communication of fevers generally, and of the exanthems in particular, so far as treating them in hospitals is concerned. Pathology has by no means said its last word on the subject, nor have sanitary science, and the carrying out of such laws as we have for the maintenance of public health and the prevention of disease, succeeded in tracing all of those diseases to their exact sources, in the manner necessary for their extinction *ab origine*.

For small-pox we have a thoroughly efficient protective agent, which, if applied in due time and in the proper manner, would undoubtedly cause the entire disappearance of the disease. But, so long as ignorance, prejudice, and the baser motives which too often regulate and control human actions prevail in such manner and to such extent in crowded populations, as to evade or defy all legislative enactments, we must lay our account with having to treat small-pox in public institutions and private houses, and must make the best provision we can to prevent its spread by mere contagion. The same is true of such fevers and other diseases as are distinctly contagious, and can be communicated to those who are brought in contact with them, professionally or otherwise, whatever their origin or exact mode of extension.

As respects hospitals, then, the question narrows itself as to whether it is best and safest, in the interests of the individual as well as of the community in whose midst he dwells or finds himself, to aggregate them together in large numbers and in special institutions, or to make due and sufficient provision for their treatment in general hospitals, or in smaller institutions scattered about where they seem most to be needed.

So far as reliable data at present exist, the question appears to me to be more one of police than of pathology; for if the means of isolation are as perfect as they can and ought to be, the protection of the community is complete, and the real danger incurred is more or less confined to those

[5] A small metal drum with elastic ends makes a good joint. The metal sides cannot fall against the catheter and obstruct it.

[6] If the patient lies on a soft bed, the bulb must be held in the hand, unless the stand be steadied, like a fracture box, by something under it. But I usually do this surgical operation like others, on a table of some sort.

[1] One of these, the West-end Hospital in Welbeck-street, was accidentally omitted in the Map, as no accessible report showed that it contained beds for in-patients.

in whose care the sick are placed. What, then, are the hospital arrangements best fitted to treat this great question in the manner necessary for the rapid extinction of zymotic disease, whenever and wherever it appears? This divides itself naturally into two heads: the treatment of the sporadic or solitary cases, which constantly occur at all times and seasons, and have no tendency to spread from epidemic or other influences; and the great outbreaks which roll, like a wave, over whole communities.

For the former it would undoubtedly be best, in my judgment, to make provision in all general hospitals by separate pavilions or wards, so effectually isolated in structure and arrangement, as to be cut off from direct communication with the rest of the sick in the same institution. The distance and extent to which such diseases are communicable to those not directly in contact with them, are, in my opinion, very small; and if broken up into manageable groups and few in number, they can be so effectively dealt with by the agencies known to neutralise, dilute, or otherwise rob of their power of mischief the agent of evil, as not to be a source of danger, even to those in charge of them. I saw a very striking example of this in the City Hospital of Boston last year, when an unmanageable outbreak of diphtheria was ultimately overcome by treatment in tents in the garden of the hospital. If all our future hospitals were so constructed and arranged as to permit of the admission of all classes of disease, accident, and injury, and the proper separation of infectious and contagious diseases, for which such excellent provision is made in M. Tollet's plan of the St. Eloi Hospital at Montpellier, there would not only be no need of massing together any of the communicable diseases, but the danger of their aggregation would be avoided.

Small pavilions in general hospitals I hold, then, to be fully adequate to deal efficiently with the ordinary occurrence of the whole class of infectious fevers, if the hospitals themselves were restricted in the number of their beds, were arranged strictly on the pavilion plan, were better distributed than they now are, and were proportioned to the ordinary needs of the population in the centres of which they are, or ought to be, situated. If additional accommodation in non-epidemic times is required, it should be provided by means of wooden huts, or, at proper seasons, of tents, a sufficient amount of ground in the hospital enclosure being always kept available for these purposes.

For epidemic outbreaks (which would often be prevented if the above-mentioned accommodation existed, and the immediate notification of the occurrence of any case of infectious fever were compulsory) special provision must always be made, and the best manner of accomplishing this would be by wooden pavilions, or, at fitting seasons, and still better, of tents. Experience acquired very long since, as pointed out by Dr. Guy in his admirable Lectures on Public Health, and as illustrated on a colossal scale in the recent wars of America and Europe, has removed this from the arena of controversy and discussion to that of accomplished fact.

In such a city as London, compulsory powers should be granted by the Legislature for the selection and permanent retention of suitable localities in which to place what may be termed epidemic hospitals; for the immediate notification of all outbreaks of contagious disease; for the compulsory removal of all attacked who cannot be properly accommodated in their own homes, so as to prevent their becoming a source of danger to others; and for the institution of a central authority armed with the power to deal with the whole matter of medical relief, in its personal and public relations, with the promptitude, economy, and unity of action necessary for the common weal.

The small-pox and fever hospitals in and around London are all good of their kind, and need no special description. As types of greater excellence in their respective ways the fever wards now in course of erection in the neighbourhood of Glasgow, and the substantial detached fever wards built in connexion with the Bury Workhouse by Mr. Lawrence Booth of Manchester, are well worthy of examination.

LYING-IN HOSPITALS.

Maternities or special lying-in hospitals are comparatively modern institutions on the Continent of Europe, and appear to have attracted special attention in France from the exposure in 1795 of the calamitous results of the treatment of parturient women, in the ordinary wards of the old Hôtel Dieu. The subject had, however, been considered and discussed as early as 1664. From the end of the last century until 1840 little, however, was said about it, when it began to be ascertained that, although placed in one of the healthiest quarters of Paris, the great maternity was peculiarly liable to outbreaks of puerperal fever. The original intention of special maternities, advocated by Tenon, was early departed from as insufficient for the increasing wants of the city, and as not affording the extent of clinical instruction required. Separate obstetric wards were in consequence added to several of the general hospitals in Paris. These continue to the present time, with, I believe, eminently evil results.

The first lying-in ward in England was opened by Sir Richard Manningham in 1739, in the parochial infirmary of St. James's, Westminster, and shortly afterwards, in 1751, the Rotunda Hospital in Dublin was established. This is probably one of the best conducted and most efficient establishments of the kind in existence. The statistics published by Dr. Evory Kennedy for the first 113 years of its existence appear to show that during this lengthened period the average death-rate in 190,783 deliveries was 1 in 72, and that it had fluctuated remarkably, having oscillated between 1 in 14 in 1802, the year of heaviest mortality, from exceptional causes, and 1 in 227 in 1766. Although such figures need explanation in many important particulars, they appear to indicate that a high death-rate is inseparable from the aggregation of parturient women, however skilfully treated or carefully managed.

In a table kindly furnished to me by Dr. Atthill, of the Labour Department of the Rotunda Hospital, are the following figures, bringing down the information to the latest possible date:—

Years.	Labour Department.			
Ended March 31st.	Admitted (non-parturient eliminated).	Died.		
		Number.	Ratio per cent.	1 in—
1871	1128	27	3·55	41
1872	1206	23	1·87	52
1873	1179	29	2·46	40
1874	1183	18	1·53	65
1875	1238	16	1·29	77
1876	1175	39	3·31	30
1877	1035	22	2·10	47
1878	1101	11	0·99	100
1879	1110	17	1·53	65
1880	1168	27	2·30	43
10 yrs. ended Mar. 31, 1880	11523	229	1·99	50

The deaths in this great institution are chiefly among the same class of broken-down constitutions from moral and physical causes, as are seen in the workhouse wards of all our great cities. According to M. Tarnier, the mortality in the Maternity of Paris has been reduced to 2 per cent.

The best known authority on the question is, however, Mons. Lefort, whose work on Maternities, published in 1866, is a storehouse of great historical and scientific value for those who care to pursue the subject further. He collected the figures of 1,843,095 deliveries—935,781 confined in town, of whom 1 in 212 died, and 888,312 delivered in Maternities and Hospitals, of whom 1 in 29 succumbed.

The above figures are overwhelming in showing the great risks to life from the old methods of dealing with the parturient poor; and although they are, as all data regarding hospital mortality must unfortunately be acknowledged to be at present, altogether deficient in scientific accuracy, they are sufficient to establish the general truth that the parturient state is similar to great traumatic injuries in its tendency to generate septicæmic poisons dangerous to the individual and to others, from their eminently contagious character, and liability to extend from epidemic causes or insanitary conditions.

The last comparative experimental inquiry on the subject was conducted in Paris, and the figures from the 1st of January, 1873, to the 30th of June, 1875, were given by M. Lefort, to whose initiative and persevering efforts the change in affording medical relief to the pregnant poor of that city was due.

The aid given to this class in the French capital, is fourfold—

1. The obstetric wards of the general hospitals.

2. The special lying-in hospitals: 1st, the Maternity; 2nd, the Clinical hospital; 3rd, the Maternity branch of the Cochin hospital.

3. The home delivery of the indigent by the official midwives.

4. The confinements of the poor at the licensed houses of the midwives of the town.

The results were: 1st, in the general hospitals 9298 deliveries, 385 deaths, or 1 in 24; 2nd, in the special hospitals 6631 confinements, 203 deaths, or 1 in 32; 3rd, home confinements, 28,006 deliveries, 53 deaths, 1 in 528; and 4th, deliveries in the houses of the sages femmes 5020, 25 deaths, or 1 in 200.

After careful discussion the chief conclusions arrived at by the International Medical Congress at Brussels, to whom the above figures were submitted, were the following:

(1) The urgent necessity of a more or less radical reform in the system of medical relief to the pregnant poor.

(2) The complete abandonment of great lying-in hospitals.

(3) The replacing of great maternities by small *maisons d'accouchement*, with separate rooms.

But now comes the question, Is it really necessary to dispense entirely with public lying-in wards, or may not most, if not all, of the important defects of the existing system be removed by improved plans of construction and arrangement, aided the application of those principles which have been so successful in diminishing the dangers of traumatic injuries? I certainly think so, and the singular and exceptional freedom from septicæmic disease of the lying-in wards of workhouse infirmaries in England, indicates the direction in which action should be taken. The statistics of those institutions in the last ten years, which I submitted to the late International Medical Congress, are a complete answer to the question, for in 87,726 deliveries, from 1871–80, there were but 116 deaths from metria, or in the proportion of 0·180 per cent., while the rate among the whole population in the thirty-three years 1847–79, was 0·2 per cent.

In France, at Menilmontant and Montpellier, small separate lying-in wards have been constructed, which leave nothing to be desired in their hygienic arrangements. The new clinique in the Jardin du Luxembourg in Paris, is also built in general accordance with the same principles.

(*To be continued.*)

HÆMORRHOIDS OR "PILES."

BY JOHN GAY, F.R.C.S.

(*Concluded from p. 497.*)

WHAT, then, are the special circumstances which in these veins determine, and thus lead to, the several forms of dilatation by which they are so often beset? The pathological facts before us, without logically arranging them, render it, I think, obvious that it is due to forces which obstructively affect their currents, in opposition to those which propel them; and tracing the process physically by the same light, it is as clear that the first step is vascular, and lies in vein repletion—local hyperæmia—either from ordinary or extraordinary causes; whilst the second, in the absence of any proof to the contrary, is extra vascular, and can only be supplied by agencies, physical or physiological, usually combined, that are capable of acting upon the vein coats, so as to obstruct them. The first of these forces collect on the capillary or ventricular, whilst the second are supplied on the opposite or auricular side, the issue of the conflict being just at those points in the vessels where the resultant blood tension is in excess of their powers of resistance. The contour, size, &c., of the bulgings indicate the amount of force expended on their production, and show that it is much less than that concerned in the production of aneurismal swellings, whilst their situation and distribution, especially the tier upon tier arrangement, one of their most common and characteristic features, point clearly to forces that act immediately on the veins athwart the normal course of their streams, and in a manner so as to give them the circular or gyrating form they assume. It follows, then, that these forces are such as no other than those engaged in the act of rectal defecation can yield—viz., intestinal peristalsis with the aid of its co-efficients in that function. But superadded to these physiological energies there are clear indications of co-operative, intermediate, and subordinate agency in the form of matter passing through the intestine rendered passively potential by quantity and solidity, and not unfrequently by an abnormal state of its mucous surface. Difficult rectal defecation, then, is the most constant if it be not exceptionally the cause of these hæmorrhoidal dilatations, and, amongst the several agencies engaged, intestinal peristalsis takes perhaps the largest direct share in consequence of the peculiarities in its nerve endowments. Thus the distribution and relative excitability of the excito-motor as well as vascular filaments in the rectal textures are such that their functional activity becomes more intense as these are displayed in nearer proximity to the anal orifice. Hence it is that, in this situation, varices are found in greatest numerical abundance, and usually attain the largest size, whilst here also reflex action displays itself in greatest activity by the formation of those folds of mucous membrane which encumber that outlet, and which with pile and other appendages often become distressing from their tendency to protrusion, and the gradually lessening power of the sphincter to retain them.

I claim no credit whatever for these commonplace observations. My object in making them is to disengage one from the many integrals by which the etiology of piles is trammelled; and to show that not only is there no other that can explain its many, and often conflicting, semeiological elements, but that this one will answer the need, and best tally with both these and their pathological requirements. In concluding these observations I must premise what I have to say on the treatment of hæmorrhoidal disease by the remark that the symptoms, together with the means of actual observation in these cases render their pathology a matter both of easy and certain inference. All hæmorrhoidal disorder begins in vein coat dilatation from functional causes, which vary from simple congestion affecting the several sets of vessels involved to hyperæmic inflammation of their coats. These states are, of course, liable to be attended with such blood and textural changes as these conditions ordinarily give rise to. After, perhaps, several successive attacks of this kind structural changes follow, and the disorder, from being acute and transient, becomes chronic and permanent, with such localised morbid results as I have attempted to delineate. But the veins thus permanently affected do not usually lose their proneness or predisposition to be attacked by those forms of sthenic disorder in which they began. This constitutes the *acute* stage of piles; a form of hæmorrhoidal disease which often presents itself, and in which its acute and chronic conditions co-exist. This, indeed, forms a state of painful urgency, for which the patient usually seeks medical relief. The clear recognition of the symptoms due to each of these distinct forms of the disease, when in conjunction, is of great moment; for as the one is in its character variably acute but transitional, and the other is in the same respect chronic and permanent, the distinction for *practical* purposes serves an important end. I say for practical purposes; for, as a rule, the supervention of an acute attack upon chronic or permanent hæmorrhoidal disease forbids, except under very rare circumstances, the employment of the special treatment that this special form requires; and as it not unfrequently happens that many of the more serious contingencies of chronic pile disease are the result of the accession of constitutional disorder, so the remedies that succeed in allaying or suppressing the latter will often, at least temporarily, in like manner affect the former. Hence the first notion of the treatment of these diseases resolves itself into *constitutional* or *local*; yet there are no periods during the adoption of remedies for one of its special phases that the possibility of its affianced complication should be lost sight of.

It is not my design here to treat or attempt to instruct as to the constitutional treatment of hæmorrhoidal disease, especially of those forms which may be said to be acute (these are well understood), beyond saying that local bleeding, where local excitation runs high, by leeches, the complete unloading of the lower bowels, and opium are amongst the most useful of the means that can be employed.

I will turn now to what I have referred to, and is gene-

rally understood, as chronic hæmorrhoidal swellings, such as result from structural changes, not always amenable to merely constitutional remedies. And of these that variety which is most common and is constantly met with, requiring local or surgical treatment, is that which I have termed varices—rectal and anal—in popular phraseology "piles." The two other varieties rarely require other than palliative and simple treatment; but should the involved tissues take courses similar to those which in the varicial form they so constantly observe, they will admit of being similarly treated. I have attempted to describe the processes of morbid and structural changes which "piles" undergo, and their usual terminations—thrombosis, ulceration with perforation, and gangrene. By the first the course to further degeneration is usually arrested, and with respect to the individual varix or pile, a favourable ending is reached. And it generally follows that the disposition on the part of the blood to coagulate is communicated from that in which it begins to the blood for a more or less considerable distance through continuous branches, or even in parts of the vein system that are discontinuous, but, in like manner, affected. It is the actual "pile" tumour that requires explicit modes of treatment, and it is usually under hæmorrhagic conditions only that it is likely to become formidable, and absolutely to demand it. The question then arises, What, according to their strict pathology, are the means best suited to command its arrest when bleeding occurs in these tumours? There can be no doubt, with an accession of rectal hæmorrhage, especially with the objective evidence that each case at that stage invariably supplies, that it proceeds from a varix or pile, and not from chemosis from the mucous surface of the bowel. Moreover, it may proceed from one or several of a cluster of such swellings coincidently, whilst others of the same cluster show no disposition to bleed. Under no circumstances ought a pile that has once bled or shown a disposition to bleed to be allowed if possible to bleed again. What then are the best methods of dealing with it? These should simply be such as are selected for the suppression of hæmorrhage through structural lesion of vein coats in any other parts of the body. On its occurrence its arrest should be promoted by raising the trunk; but in successive acts for its permanent suppression this is not actually needed, unless the flow is considerable and likely to become dangerous.

The actual stoppage of the bleeding should, then, be accomplished by bringing every point that bleeds under the influence of some efficient therapeutical styptic or mechanical contrivance. As to these appliances it is not, I think, of much importance which should be selected out of the many that are commended, so that the one used will secure the object in view. Amongst styptics nitric acid and the perchloride of iron are most generally employed. In my opinion the latter, in the form of the tincture, is the most trustworthy, if applied upon the bleeding pile, as freed from moisture or dry as it can be rendered, and without stint or fear. Actual cauterisation by means of a needle heated by the benzine method, or the common cautery, is also an esteemed method in anal piles, and with the aid of Mr. Smith's clamp can, I think, be made effective and secure. On the whole, I must say I have preferred the ligature, which can be easily applied, and with efficient limitation, to the points actually requiring it, whether these include the summit of the bleeding orifice only or the whole pile, which is generally preferable. By this method the injury to parts, not engaged in the hæmorrhagic action and that give no offence, and with it all chance of further hæmorrhage from the same source, are avoided. The method is very simple. There is no difficulty in everting every portion of the rectum in which bleeding from this source is likely to, or can, occur, and the result is unattended with the distressing and painful endurance which is the fate of patients under more heroic treatment for hours or days after, as well as prolonged convalescence.

But there is one other consideration which I beg to suggest to the profession, and upon which, from my own experience, I have arrived at a conclusion satisfactory to myself, and this is, that the modern practices preliminary to pile operations are not commendable; but, on the other hand, positively prejudicial. I refer to the advised habit of what is called "bringing down the piles," by exciting exaggerated peristalsis, so that they can be more easily manipulated. This custom is not only objectionable, in my view of the matter, in a scientific view of the process, but is calculated, in the place of furthering the objects designed, rather to embarrass the operator in prosecuting it. Stimulating injections, and enforced peristalsis to the full extent to which it can be raised by means of local digital and even instrumental irritation, are usually employed for this avowed purpose. The end—i.e., the full exposure of the bleeding piles—might assuredly be otherwise gained without being accompanied by such excesses in the way of result as textural protrusion, free surface bleeding, &c., which not only obscure the diseased tissues, but disturb those ordinary conditions by the preservation of which, if possible, in a state of quiescence, surgical interference can be carried out.

There are few cases of chronic anal hæmorrhoids in which the lower portions of the rectal mucous and submucous tissues do not form themselves into more or less extensive folds, and protrude on being moderately irritated. Moreover, they become vascular, and often, like piles so situated, the seats of fissure, excoriation, and ulceration; and, extruded under such circumstances and by such means, a difficulty presents itself in distinguishing between the real and the secondary mock disorder. Thus large portions of tissues which bleed, under this kind of treatment, affect the appearance of hæmorrhoids, and are consequently not unfrequently cut away unnecessarily and in great profusion. The treatment preliminary to operation should be confined to that which will place the patient in the best state of health of which his system is susceptible, and the parts in the utmost state of possible quiet, for purposes of operation, and for some few days after operative proceedings.

I may just add that those dermal folds which so often make their appearance as life advances on the verge of and within the anus, and assume the form of thick, warty, or pendulous growths, sometimes of large size, are in nowise necessarily associated with piles; and that for them scissors are the fitting and best remedy.

ON CERTAIN LITTLE RECOGNISED PHASES OF TABES DORSALIS (LOCOMOTOR ATAXY).[1]

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IN his description of the symptoms of tabes dorsalis, Romberg gives the greatest prominence to the insecurity of gait. "The patient, as he does not feel the tread to be firm, puts down his heels with greater force. From the commencement of the disease the individual keeps his eyes upon his feet to prevent his movements from becoming more unsteady. If he is told to close his eyes while in the erect position he at once begins to totter. ..... In no case have I found the symptom wanting." So also Duchenne (de Boulogne) in his classical description of the same disease, under the name of progressive locomotor ataxia, allots the foremost place to this motor trouble. "In the first rank I place the troubles of coördination of movement.....because they constitute the fundamental character of progressive locomotor ataxia."

The ataxy has been so strongly insisted upon by these and succeeding writers that it is necessarily regarded as the dominating symptom of the disease, and to very many persons the idea never suggests itself that a patient who has no ataxy may be an example of tabes dorsalis. The object of my paper is to suggest that, whilst allowing this highly characteristic symptom all its value, where present, we must recognise that it may be entirely wanting, and some one or other of the symptoms (which may not ordinarily be a striking one) may come to occupy so prominent a place as to absorb the attention, and cause the patient's state to be referred to some entirely different pathological condition.

Westphal's test, the absence of the knee phenomenon (provided that this is associated with good voluntary power and idio-muscular contraction), is an almost certain sign of tabes, when it is accompanied by characteristic lightning

[1] Abstract of a paper read before the Section of Medicine in the International Medical Congress, 1881.

pains, and probably also when it is joined with any one other of the ordinary symptoms of tabes.[2]

I am prepared to believe that the absence of patellar tendon-reflex may sometimes be the *only* symptom of tabes present in a certain case.

Let me now refer to some cases which show how the predominance of a not ordinarily prominent symptom of tabes, ataxy being absent, may lead the observer completely astray.

A gentleman, aged fifty-two, was brought by his medical attendant suffering from emaciation and neuralgia in the head. For fourteen years he had been subject to "rheumatic" pains in the limbs, and the year previously he had sudden shooting pains between the ribs. For fifteen years he had been liable to occasional (once in six or eight weeks) attacks of gastric pain and vomiting, lasting from one to four days. There was no epigastric tumour; the urine contained no albumen. Breathing was short, and there were some signs (not positively marked) of a cavity in his right lung. The pupils were extremely small, did not respond to light, but contracted during accommodation. The patellar tendon-reflex was absent in each leg, the vasti interni muscles showing, however, excess of irritability to direct percussion. There was no ataxy, but the patient allowed that he did not feel secure in the dark.

I lately learned that this patient died two months after his visit, and that his case was diagnosed by a physician, subsequently to my examination, as one of malignant disease of the stomach. There was no autopsy. This man was certainly affected with tabes, as shown by the symptoms enumerated. The attacks of pain and vomiting (crises gastriques of Charcot) dominated the other symptoms, which required to be looked for.

At Cambridge last year I brought forward the case of a man, aged sixty-two, affected with tabetic arthropathy, the head of his left humerus having disappeared. The loss of the use of the arm had brought the man to the workhouse, where, it is interesting to note, he was employed as a messenger, being able to walk as many as ten miles a day. He had no ataxy, but he had lightning pains; pupils insensitive to light, but contracting during accommodation; absent knee phenomenon, and a history of crises gastriques, so severe that I regret my space will not allow me to describe them in detail. At fifty years of age he had been attacked with dreadful pain in the epigastrium and continued retching. For nine months he was never without pain and vomiting and retching, which resisted all treatment (cupping, blistering, leeching, amongst other things), and reduced him to death's door. His attacks gradually ceased, and he returned to work, but was still liable to occasional slight attacks, and at the end of a year was again laid up for three months with a similar illness. Altogether he had some half-dozen severe attacks of the crises gastriques, which in his case again dominated all other symptoms, so that no suspicion had been entertained of the nature of his disease till the examination which I made in connexion with his joint affection revealed its real character.

In another joint case[3] the patient, a female, had been admitted into a workhouse infirmary entirely on account of "long-continued indigestion." She would have attacks of gastric pain and vomiting, lasting ordinarily two or three weeks at a time, and recurring at intervals which varied in length. In her case it was not till seven years after the beginning of these attacks that she began to show any incoördination of movement. She had Westphal's symptom, insensitive pupils, as well as lightning pains, amongst other symptoms. In another joint case the gastric attacks had preceded the appearance of any ataxy by four or five years; in another they had occurred for twelve years before the gait was at all affected.

Through the kindness of Mr. Herbert Page I had lately the opportunity of examining a young man who had applied to him at St. Mary's Hospital on account of joint disease in the foot. In his case again a gastric attack (pain, vomiting, retching, flatulence), which lasted more than three months, and brought him so low that he could do no work for six months, was part of the history. The gentleman who attended him in that illness tells me that he had not the slightest idea that his patient was affected with the crises gastriques of tabes. The man has no ataxy. The knee phenomenon is absent; the pupils do not react to light, but respond during accommodation. He has suffered from lightning pains.

I would suggest that many cases of so-called "gout in the stomach," would be found, if examined by the light of our present knowledge, to be examples of tabes dorsalis with gastric crises. In such circumstances the lightning pains, which would probably be an associated symptom, would appear to many to render the diagnosis of "gout" complete. Not a few cases thought to be ulcer of the stomach or malignant disease are probably examples of tabes. The crises gastriques have also given rise to the diagnosis of intestinal obstruction. It is not impossible that they may be confounded with the attacks of vomiting which are apt to occur in Bright's disease.[4]

The prominence, in the instances referred to, of the gastric symptom, whereby the whole attention tends to become absorbed by it, may, there can be little doubt, distinguish others of the symptoms of tabes. Mr. Macnamara showed me recently a man suffering from tabetic arthropathy who had been sent into the Westminster Hospital as an example of malignant disease of the hip-joint; and another of similar nature, in whose case, again, attention had been so entirely directed to the joint affection as to overlook the constitutional disease which lay behind.

Pierret has well shown that tabes is essentially a disease of the *sensory* tract. In his important essay "Sur les symptômes céphaliques du tabes dorsalis," he remarks that the auditory nerve is frequently affected in tabes, and although the fact of its being occasionally involved had previously been mentioned by Duchenne, Remak, Topinard, and others, I do not think the frequency of the association has been at all appreciated. Since Pierret called attention to the point, I have had constant occasion to observe more or less deafness in cases of tabes, sometimes only of passing character. My colleague, Dr. Ormerod, also has given me notes of thirteen cases of tabes observed recently by him, in five of which there was more or less deafness. It appears to me quite possible that affection of the auditory nerve may be a dominant symptom in some cases of tabes, just as lesion of the optic nerve is in others, and that certain cases of "nervous deafness" may be found to be really examples of tabes dorsalis. The association of progressive atrophy of the optic nerve with tabes has long ago been pointed out, especially by Hughlings Jackson and Charcot. In one case recorded by me the patient, besides this symptom, presented no other, except that the patellar tendon-reflex was absent from one leg and shortly afterwards disappeared also from the other. I have quite recently seen a precisely similar case with Mr. Bowman. Westphal's symptom, which has shed such light on the nature of these cases of optic atrophy, may very possibly help us equally in cases of previous deafness.

It has occurred to me to see one person whom the presence of a stone in the bladder led me to examine for tabes. The knee phenomenon was absent, and he had characteristic lightning pains. Cases of stone do not come much in my way, and I can therefore only suggest to others that the patellar tendon-reflex should always be examined in such instances. In advanced stages of tabes there is often paralysis of the bladder. But a certain amount of difficulty in emptying the bladder is frequently an early symptom. When this is the case there is always the possibility of cystitis occurring from urine getting retained, and a phosphatic calculus—a "local" calculus, as Sir Henry Thompson calls it—may easily be formed in the mucus of the bladder. In this way a bladder trouble may easily come to be as prominent and absorbing a symptom in one case as the ataxy, or the gastric crisis, or the optic atrophy in another; and

[2] There is one pathological condition which may give rise (as I have known happen) to some doubt. In diphtheritic paralysis there is often a tottering gait accompanied by numbness in the extremities. The patellar tendon-reflex is absent, whilst the vastus internus muscle may contract freely to direct percussion. The ordinary accompaniments of difficult deglutition and faulty accommodation of the eye-muscles may not be present. In such a case the history should prevent error. It is worth while remembering also that in tabes the response of the vastus internus muscle to direct percussion may be, as I have shown (THE LANCET, July, 1878), actually more lively than in health. This is not the case, I think, in diphtheritic paralysis, but my experience as regards this disease is much more limited.

[3] Transactions of the Pathological Society, vol. xxxi.

[4] In February, 1880, at the Pathological Society (Path. Transactions, vol. xxxi.), I ventured to suggest that the crises gastriques of Charcot depended upon irritation of the nuclei of the pneumogastric by sclerosis. At that time anatomical proofs in support of my hypothesis were wanting. During the recent meeting of Congress, Professor Pierret was kind enough to show me some microscopic sections of extreme interest. They were from a case of tabes dorsalis with crises gastriques, and showed sclerosis of the funiculus gracilis, closely adjacent to the nuclei of the vagus.

should ataxy be absent the real nature of the affection may easily be overlooked.

Hemiplegia may mask the symptoms of tabes. There is a man now in hospital under my care who in April last was attacked with weakness and numbness in the left limbs, and in twenty-four hours was completely hemiplegic on that side. The leg has greatly recovered, but the arm is powerless, rigid, and contracted. In such circumstances, as is well known, one expects to find more or less marked exaggeration of reflex in the affected limbs, instead of which, in this man, no result whatever follows blows upon the wrist or upon the patellar tendon. Inquiry elicits the information that he has suffered for ten years from lightning pains, and that he has had diplopia; examination shows that his pupils are inactive to light, but contract when he looks at a near object. Thus the condition peculiar to tabes apparently overpowers that which occurs as a result of secondary degeneration after hemiplegia.

Sudden giving way of the legs, so that the patient may actually drop to the ground, is a symptom which has not, so far as I know, been described amongst those characteristic of tabes. It is, however, one of common occurrence. A gentleman, aged fifty-one, whilst standing up in church, felt his legs suddenly give way, and he dropped into his seat. When this had been repeated on several other occasions he came to consult me about the symptom, and for this only. There was no alteration of gait. Examination showed absence of patellar tendon-reflex. There was a history of so-called "rheumatic" pains, and numbness of one hand.

This sudden giving way of the legs happens frequently in connexion with a particularly sharp dart of lightning pain, but sometimes without it. I do not here refer to the insecurity and tendency to fall often seen in an ataxic who is struggling wildly to preserve his balance. This sudden "giving" at the knees often occurs in persons who are tabetic, but not ataxic. It is not a spasm, but a passing paralysis. A letter-carrier told me that one day, whilst walking through the streets on his rounds, he was seized in this way, and would have fallen but for laying hold of something. Another letter-carrier said he found his knees give way when running up and down the steps of houses, and this was followed not long after by ataxy. At the time of his legs giving way he had had no pains. The symptom appears to belong to the same category as the passing diplopia from failure of an eye muscle, which Pierret attributes to transitory paralysis caused by irritation of the sensory root of a nerve.

Paraplegic symptoms may be so strongly marked as to obscure the diagnosis. Of this I have lately seen a striking example in the person of a man who almost immediately upon an attack of syphilis got rapid loss of power in his legs, with imperfect action of the bladder, similating an attack of acute myelitis. But his superficial reflexes were quite perfect, whilst the knee phenomenon was absent, and the diagnosis of tabes was confirmed by the occurrence of diplopia a few weeks later.

Not long since, by the courtesy of Mr. de Watteville, I saw a man who had suffered for twelve years from an occasional feeling "as though he might fall down." His condition had been attributed by those whom he consulted to a cerebral affection. Mr. de Watteville, however, found that he had no knee-phenomenon. Only after his anomalous head symptoms had lasted twelve years did he begin to suffer from lightning pains, and still later a slight ataxia of gait betrayed itself. I found his vastus internus muscles were irritable to percussion, and his pupils scarcely acting to light, whilst contracting during accommodation of the eyes. In him also a symptom of tabes was to be noted, which is very frequent and important—delay in the reception of painful impressions.

Grosvenor-street, W.

FORTY-FOUR persons were summoned at the Bedford Borough Police Court on Monday for neglecting to have their children vaccinated. In most of the cases fines were imposed; one of the defendants, however, preferred to go to prison.

A FANCY fair on an ambitious scale has been opened in Plymouth Guildhall for the purpose of assisting in the raising of funds for the proposed hospital of the town. The building is estimated to cost £30,000.

INTRA-CRANIAL LESIONS,

ILLUSTRATING SOME POINTS IN CONNEXION WITH THE LOCALISATION OF CEREBRAL AFFECTIONS AND THE ADVANTAGES OF ANTISEPTIC TREPHINING.

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Introductory remarks. — I. A Compound Comminuted Depressed Fracture of the Skull. Depressed fracture of portion of occipital; slight mental confusion; trephining and elevation of portion of bone; transplanting of portion of skull into trephine opening; recovery. — II. Opening of Dura Mater for escape of Blood which was causing Cerebral Pressure and consequent Convulsions. Simple fracture of skull without depression; slight mental confusion; series of convulsions on sixth and seventh days after injury; trephining; opening of dura mater; escape of blood; complete recovery.

INTRODUCTORY REMARKS.

FEW cases require more concentrated attention than intra-cranial lesions. The frequency with which a fatal issue follows them is such as to obscure the advantages of surgical interference. Two hindrances to operative measures present themselves—the difficulty of localising the cerebral affection, and the danger of inflammation. Of recent years much has been done to remove these difficulties. The advances made in the localisation of cerebral function have afforded aids to the diagnosis of cerebral lesions, and means have been devised for the prevention of the chief cause of inflammatory action; so that the surgeon has better indications to guide him to the part of the brain affected, and by adopting aseptic procedures and antiseptic precautions the risks of operations are reduced to a minimum.

When it is remembered that cerebral pressure is so frequently the cause of serious consequences following head injuries, it ought to be considered whether operations directed towards the relief of that pressure ought not to be more frequently resorted to. The immediate cause of cerebral pressure following injury is generally found near the surface, and traumatic hæmorrhages are therefore as a rule easily approached. In depressed fractures of the skull the practice at present carried out by most surgeons is not to interfere unless symptoms indicative of mischief arise, and they believe themselves justified in maintaining this view from the very numerous cases of recovery which attend this practice. Though under this treatment many such cases make what seems to be an excellent recovery, and are dismissed apparently cured, a number of them afterwards exhibit serious mental defects. In the course of surgical practice I have been struck by the number of persons who are found suffering from mental peculiarities or weaknesses following head injuries, which had been treated passively. Some suffer from giddiness and temporary mental confusion when spoken to abruptly, or when they attempt any sudden movement. Others have loss of memory and power of sustained attention to such an extent as to unfit them for many occupations, while some are irascible at trifles and become infuriated on taking small quantities of alcohol, quantities very much smaller than what they took daily previous to the injury without doing them apparent harm.

While a believer in the expectant treatment in head injuries some of the above points were well illustrated in a series of cases which came under my care, and which were shown by me at the Clinical and Pathological Society, Glasgow, as examples of the excellent results accruing from non-interference. At that time they had apparently all recovered from the effects of the injury, and were seemingly in a good state of health. Their subsequent history was, however, the reverse of favourable.

One of these suffered from fractured base, the fracture also extending through the squamous portion of the temporal into the parietal, the latter part being slightly depressed. Though he apparently recovered perfectly at the time, yet within a year afterwards he began to show, first, loss of memory, then decided delusions, which totally unfitted him for work. Another, who suffered from fracture of the base, and who made an excellent immediate recovery, began

during the first nine months to exhibit loss of memory, and loss of the power of sustained attention, to such an extent that, though he was an excellent mechanic, he had yet to be watched and frequently reminded of the particular work at which he was engaged. In two cases, at least, of compound depressed fracture of the skull, which had made good recoveries, mental deficiencies began to present themselves at later dates. One had a compound fracture over the left temporo-parietal suture, running vertically into the parietal, the posterior border of the base being depressed below the anterior to the extent of an eighth of an inch. As there were no symptoms of brain pressure it was not elevated. The wound healed and the patient recovered. Within eighteen months after dismissal he returned to complain of giddiness and confusion when he attempted to do anything sudden; this caused him sometimes to fall. At times, when he fell, his parents stated that he appeared to pass into "fits," and that these "fits" were confined to the right side of the body, the side opposite to the head injury. The fits were not seen while under observation afterwards in our wards, though the giddiness and confusion were several times clearly enough exhibited when he was taken by surprise, or when suddenly asked to do anything. The fourth case was one of compound fracture running through the right parietal at right angles to the ear. It was two inches and three-quarters in length, and towards the centre of the fracture the posterior portion was depressed to the extent of a quarter of an inch. This was not elevated. The wound healed and the patient apparently recovered. Within eight months after dismissal, though very acute and active in doing anything under his immediate observation, he was yet extremely forgetful, the names of many of the simplest objects with which he was familiar would escape his memory. He would handle them and use them correctly, but could not recall their names. Previous to the injury it was said that he had a very good memory.

If in these two latter cases the pressure could have been removed there is a reasonable probability that the result would have been more favourable. These instances illustrate the fact that though patients affected with cerebral lesions may apparently recover perfectly, as far as the immediate effects are concerned, yet they may ultimately develop serious mental deficiencies. These cases did well in the wards and for a short time after dismissal, and had our observation of them ceased after they had been shown at the Pathological and Clinical Society they would have helped to swell the list of good results from expectant treatment. It still remains to be proved whether interference in these cases would have been productive of a better result. It may have been that the lesion was beyond the surgeon's power to remedy; all that is fully recognised, but what is wanted to be brought prominently forward is that too much reliance must not be placed in statistics of complete recovery in head cases when the surgeon's observation of them ends on their exit from the hospital.

The following cases show the good results obtainable from trephining in certain instances where the lesion is localised, and the complete immunity from inflammatory products attending operations on the skull and its contents.

I. COMPOUND COMMINUTED DEPRESSED FRACTURE OF THE SKULL.

Depressed fracture of skull; slight mental confusion; trephining and elevation of portion of bone; filling the trephine aperture with portion of the internal table of the skull; recovery.—S. W——, aged seventeen years, was admitted on Nov. 8th, 1879, into Ward 29, Glasgow Royal Infirmary, suffering from a wound an inch and a half in length externally, situated over the left side of the occipital bone, above and near to its protuberance, the soft tissues being penetrated, and the skull driven in. Both tables of the indented portion were found under the internal table of the other side. The indented part consisted of a series of pieces resembling a green-stick fracture. The patient exhibited confusion of intellect and general uneasiness. The situation of the injury, the amount of depression, and the mental confusion caused me to operate at once. Attempts at elevation proving futile, a disc of bone, including the depressed part, was removed. The dura mater was slightly lacerated by the injury. Half a minute after the elevation of the disc the brain pulsations became distinct. A part of the inner table, which had been detached and displaced, was elevated, washed, and placed across the trephine aperture. A hair-drain was inserted, the pericranium stitched closely over the aperture by internal gut sutures, and the external parts of the wound were likewise closed by gut.

On Nov. 20th the wound was healed. The patient never had a bad symptom. The temperature was normal the morning after the operation, and never rose above it. His mind was clear. The wound healed without pus production.

On Dec. 2nd the wound was firm, and it was with difficulty that the seat of the trephining could be made out. A plate of bone filled up the aperture which had been made. He visited the ward several times afterwards, the last time eight months after the operation, when he was in good health mentally and bodily.

Remarks.—This presents a simple case of compound depressed comminuted fracture of the skull. It was found that the internal table of the skull was more injured and displaced than the external. After the extent of the injury was ascertained, and the portion of bone elevated, one part of the internal table which had been detached was drawn out and placed in the trephine aperture. This portion of transplanted bone formed an osseous wall, which filled up the aperture made by the trephine. There was no inflammatory indication from first to last.

II. OPENING OF DURA MATER FOR ESCAPE OF EFFUSION OF BLOOD PRODUCING CEREBRAL PRESSURE AND CAUSING CONVULSIONS.

Simple fracture of skull without depression; slight mental confusion; series of convulsions on sixth and seventh days after injury; trephining; opening of dura mater; escape of fluid and clotted blood; recovery.—J. D——, aged nine years, was admitted into Ward 29, Royal Infirmary, Glasgow, on March 13th, 1879, having previously fallen out of window about fifteen feet from the ground. There was a swelling of slight extent over the right side of the brow, and same side of face. The pupils were normal. He was slightly confused, but could answer questions intelligently though slowly. He complained of pain over the right side of the head and back of the neck. He was ordered to be kept quiet in bed, to have his bowels acted on, to be placed on low diet, and to be carefully watched. During the first twenty-four hours the right eyelids began to be infiltrated with blood, the infiltration commencing in the lower eyelid. After the first forty-eight hours the swelling over the right side of the head somewhat subsided, and a slight irregularity in the cranial wall presented itself near the coronal suture.

On the sixth day from admission, while lying quietly in bed, the left eyeball, eyelids, and muscles on the left side of the mouth began to twitch, both eyeballs being turned towards the left side. Shortly afterwards he lost consciousness. This condition lasted for half an hour, towards the end of which he vomited freely. After this the twitchings passed off and consciousness slowly returned. His bowels were freely acted on during the following night.

Next morning at 11 o'clock (seventh day from that of the injury) he had a series of convulsions. They commenced sixteen hours after the first attack. The left eyelids and muscles of the left side of the face were first affected; then the muscles of the left upper extremity, and after some hours the right side of the body, especially the arm, became involved. The pupils became dilated and fixed. About half an hour after the onset of the convulsions he became unconscious. The rectal temperature, which had remained about 99° from the date of his admission till shortly before his first attack, and which had fallen to normal between the first and second seizures, began to rise. At 10 A.M. it was 98·6°; at 11 A.M. 99°; at 1 P.M. 99·2°; at 5 P.M. 100·3°; at 6.40 P.M. 100·8°; at 8.10 P.M. 101·3°; at 9.10 P.M. 101·6°. At the commencement of the second convulsive seizure another brisk purge was administered, and his hair, which had previously been cut short, was shaven. As the symptoms became aggravated trephining was proposed. The symptoms pointed towards the right hemisphere of the brain as the seat of injury, and the particular *locus* was determined by the discoloration situated over the right portion of the coronal suture, where fracture was suspected. Dr. Robertson, Lecturer on Mental Diseases at the Royal Infirmary School of Medicine, was consulted, and agreed that trephining was clearly indicated, though, looking to the condition of the patient, his prognosis was not very favourable. At 9.30 P.M. he was placed under the influence of an anæsthetic; an incision was made over the tissues on the right side of the skull in a line with the coronal suture. A fracture of the skull was found running obliquely across the coronal suture, implicat-

ing the parietal and frontal at either extremity of the broken portion. Including the portion of the suture which was separated, the fracture was four inches in length. The fracture was not depressed, and it was therefore not deemed sufficient to account for the symptoms. A disc of bone was consequently removed. When the dura mater was exposed it bulged into the trephine opening; but there was no brain pulsations observed. Five minutes were allowed to elapse, and as during this time no cerebral pulsations were seen or felt, a crucial incision was made into the dura mater, when about two ounces of fluid blood and a quantity of clotted blood escaped with a gush. A few portions of clotted blood were then removed from under the dura mater. The cerebral pulsations returned in about a couple of minutes after the escape of the pent-up blood. The operation was aseptic, and the wound was dressed with gauze. The patient regained consciousness as soon as the effects of the anæsthetic passed off. At the next morning's visit he was quite intelligent. His temperature fell to normal during the first twenty-four hours. He never had a bad symptom after the operation. The wound healed quickly and formed a firm elastic layer over the aperture. He has been seen many times since he left the hospital. On the last occasion, eighteen months after dismissal, he was in excellent health and in the enjoyment of a very clear intelligence.

(To be concluded.)

CASES OF OVARIOTOMY PERFORMED UNDER "MODIFIED LISTERISM."

BY GEO. GRANVILLE BANTOCK, M.D., F.R.C.S. ED.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

(Concluded from page 500.)

CASE 6.—E. H. E——, aged thirty-four, mother of four children, the youngest thirteen months old, had a miscarriage at Christmas last. Sent to me by Mr. Moxon of Brigg, she was admitted on March 5th. Operation March 9th, 1881, lasting sixty-five minutes. Tumour, twenty-three pounds; uterus drawn up above the level of the lower angle of the incision, and it was easy to understand why the patient aborted in her last pregnancy. There were very firm adhesions in the right half of the pelvis, and I was unable to make any impression on them till I had divided the very short pedicle after securing by double and circular ligatures. I was then able to get at the adhesions from below where I found them more vulnerable. On completing the separation of the tumour there remained a flap of peritoneal membrane as large as the palm of the hand. This I secured by ligatures of silkworm-gut, in three portions, as deeply as possible, and cut away. As there was still considerable oozing deep down in the pelvis, which I could not bring into view, nor control by packing in sponges, I put in a six and a half inch drainage-tube and then closed the wound. Six ounces of bloody serum were obtained in twenty-eight hours, the last quantity amounting to only three drachms of a clear reddish serum, and containing no bacteria. After washing out the tube with a 1-20 solution of sulphurous acid I removed it and the opening forthwith closed up. At that time the temperature was 100·4° (pulse 100); two hours afterwards it was 101·2°; in six hours more it was 100°, and on the fifth day after some fluctuations it was normal. The sutures were removed on the ninth day, when the wound was quite healed and perfectly free from irritation. She was up on the eighteenth day and left the hospital on the twenty-fifth day.

CASE 7.—S. G——, aged thirty, mother of five children, the youngest thirteen months old, sent to me by Mr. Babb of Wrangle, was admitted on March 16th. The patient was very much emaciated, and measured forty-nine inches at the umbilicus. Operation, March 21st, lasting seventy minutes. Tumour, sixty pounds, adherent more or less to the whole extent of the parietes, very closely in right flank, to the tip of the gall-bladder, somewhere about the root of the liver, to the cæcum and ascending colon, and in the pelvis. These adhesions were very firm and, as in the last case, I was obliged to divide the pedicle (after securing by double and circular ligatures) before I could overcome those in the pelvis and along the course of the ascending colon. I found them more easily attacked from below. Several ligatures (of fine silkworm-gut) had to be applied to bleeding points, one to the tip of the gall-bladder, and hæmostatic forceps were freely used. There remained considerable oozing, particularly in the right flank and under the liver, and a number of sponges were packed in. On removing these, after putting in the abdominal sutures, as well as one from Douglas's pouch, they were so full of bloody serum that I was again obliged to use a drainage-tube (6½ inches).

When put into bed the patient was very cold and the pulse could with difficulty be counted. No stimulants were given, but hot-water bottles were applied until she had become warm. Four hours afterwards beef-tea injections were begun and repeated every two hours for three days, the rectum being washed out once in this period. After being washed out a second time they were continued at intervals of three hours for fifteen hours, when they were discontinued and the rectum was finally washed out. The tube was removed at the end of 104 hours, and twenty-seven ounces of red serum were obtained. No portion of this contained bacteria, but a few micrococci were found. The highest temperature was 100·6°, eleven hours after operation; within twenty-four hours more it had fallen to 98·8°, and from that time till the tube was removed it did not exceed 99·2°; for the most part it was normal, and at times even subnormal. The pulse never exceeded 92 and was mostly under 80. The flatus did not come away at all well, but was troublesome for several days, the difficulty appearing to be about the cæcum and ascending colon, but by turning the patient from side to side relief was obtained from time to time, aided by the administration of opium and belladonna. On the sixth day the rectum was cleared by enema. The patient was out of bed on the seventeenth day, and left the hospital on the twenty-first. The abdominal walls were still very redundant.

CASE 8.—C. K——, aged forty-one, mother of ten children, the youngest two years and two months old, was admitted on March 28th, being sent to me by Mr. Jonathan Hutchinson. She came under his notice in the London Hospital, where he was obliged to partially tap her—viz., of a large pailful of thickish fluid, in order that she might bear the removal. This was done about twelve days later. She was terribly emaciated, so much so that it was impossible to get within about a degree of her temperature in the axilla. On admission, and until the day of operation, the temperature in the vagina was 100° and over. Operation March 30th, lasting seventy minutes; parietes œdematous below. Tumour weighed 25lb., intimately adherent to the whole parietes, extensively to the omentum, to about a foot of the small intestine, the ascending colon, and in the pelvis. The adhesions were very vascular, partly because they were recent and partly because of inflammatory action in the tumour, the larger cysts containing a large quantity of flaky lymph. The bleeding from the omentum was so free that I was obliged to put a temporary ligature around a large portion of it while I was separating the others. After securing the pedicle (right side) by double and circular ligatures, and applying three ligatures to bleeding points on the small intestine, and one by transfixing to one on the left flank, I removed the temporary ligature from the omentum, and dividing it into five portions I applied as many ligatures and cut the pieces away. Sponges were packed into the right flank and on the colon while I put in the abdominal sutures. On removing these they were found heavy with bloody serum, and I therefore put in a drainage-tube. All the ligatures with the exception of those on the pedicle were of fine silkworm-gut.

When put into bed the patient was very cold, and the pulse was small and frequent (120). Warmth was restored by means of hot bottles. Four hours afterwards beef-tea injections were begun, and repeated every two hours, until, at the end of nineteen hours, they had to be discontinued, as the patient tasted the beef-tea, and for several times was sick soon after receiving them. Barley-water was begun about midnight, but though there was no nausea the patient repeatedly vomited whenever she had to cough to get rid of phlegm. The pulse ranged between 150 and 160, very feeble; but the respirations never exceeded 22. The temperature once reached 101° (in the vagina). Ammoniated quinine and brandy, in small quantities, were tried, but without any apparent benefit, and fifteen grains of quinine were given in four doses along with the beef-tea injections. At the end of twenty-four hours her condition was as follows. Pulse 140, temperature 100·4° (vagina), respiration 19. The tube was removed at the end of sixteen hours, only two ounces and a half of red serum, gradually getting paler, having come away; patient taking small quantities of milk and

barley-water, with a teaspoonful of brandy. Next morning (April 1st)—i.e., forty-one hours after operation, the temperature was 99·8° (vagina), pulse 124, respiration 19; sickness had ceased, but no flatus had passed; her food consisted of milk and barley-water, with a little brandy.—2nd: Temperature ranged between 100° and 101°, pulse 108 to 112, flatus passing in very small quantities, a little distension of small intestines, both flanks and epigastrium being hollow. Food as before, with the addition of a pint of chicken broth, with barley.—3rd: Considerable distension, but still partial, the small intestines standing out in large knuckles in the region of the umbilicus, and the flatus coming away in very small quantities. Ordered tincture of opium and belladonna, of each ten minims, every six hours, by rectum. Food as on previous day. Pulse 108, temperature between 99·8° and 101·4° (vagina).—4th: A great deal of pain at times from the imprisoned flatus. Opium and belladonna continued; temperature 99° in the morning to 100·4° in the evening, pulse 108.—5th: Same condition of small intestines; temperature between 100° in the morning and 102·8° in the evening, when the pain was most troublesome, and the flatus coming away badly.—6th: Flatus passing more freely, temperature down to 98°; four pills (compound extract of colocynth and hyoscyamus, of each one grain) at intervals of four hours.—7th: Bowels moved several times, with escape of a large quantity of flatus. From this time the progress of the patient was uninterrupted. She was out of bed on the 15th, rapidly gaining strength and flesh.

On reviewing these cases one cannot but be struck with their severity. Thus, in seven out of the eight there were adhesions of more or less importance, and in the eighth there were twenty-eight pints of colloid free in the peritoneum. In six out of the eight I was obliged to have recourse to the drainage-tube. In one of these, however, the result showed that it might have been dispensed with, though even here I do not regret its use, for I contend that a patient upon whose peritoneum is thrown the task of absorbing only so little bloody serum as two or three ounces, will not make such a good recovery as one who is spared this risk, even if she escape septicæmia. It has been shown over and over again that the leaving of even a small quantity of bloody serum to the chance of being absorbed is a much more serious thing than the leaving a like or larger amount of blood. The value of the drainage-tube is conspicuously shown in five of the six cases, and in none more so than in the colloid case. I have seen several cases of this kind die of septicæmia, even under strict Listerism, when the drainage-tube has not been used. But it is a curious fact that I had noted many recoveries before Listerism, without the drainage-tube, in patients with the same form of disease. Keith is strongly of opinion that under strict Listerism the drainage-tube is a necessity in such cases. No. 5 is a remarkable instance of rescue from a very serious complication. In this case the accident was apparently due to the fact that the bladder had become fixed, while in a distended condition, by the occurrence of the inflammatory process, which caused the tumour to adhere to the parietes in its immediate vicinity. Although the tumour seemed to move freely, but with pain, the excessive vascularity made me anticipate the adhesion which I encountered. Here another opportunity is afforded me of calling attention to the value of the silkworm-gut as a material for ligatures. It has been affirmed that this substance does not undergo absorption, but is encapsuled and discharged after a time. Such a result is at least beyond my experience, and I cannot but think that a great deal of time is wasted in experimenting on catgut, one method of preparation succeeding another in its claim for acceptance when all the while we have a material at hand which cannot be surpassed. But this is not the place to follow up this subject. One fact stands out clear—that in not one of the above cases did bacteria appear in the fluid drawn from the drainage-tube, which was exposed to the air 13, 18, 33, 6, 22, and 5 times respectively. I have already stated that I do not use the spray after the operation. It may be asked, Why do you use the spray at all? I reply, because it prevents blood and ovarian fluid from drying up on the hands, macintosh, &c., and a single sweep of the sponge suffices to clean up the moistened surfaces. If we are to accept the experiments of Mikulicz, the spray must be injurious, inasmuch as he has found that the spray contains four times as many bacteria as the undisturbed air of the room, and that as these bacteria are dry and not in a state to be acted upon by the carbolic acid, they thus gain access to the peritoneal cavity uninjured and ready for their dire work. But we may rest in peace on this account, seeing that the living tissues are able effectively to dispose of them provided they be deprived of appropriate nidus by using a drainage-tube.

We have here, then, eight cases, all severe, without a death (for no one I presume will maintain as far as this inquiry is concerned that the death of No. 3 was due to the operation). If to these I add five cases of oöphorectomy (which I hope to publish on a future occasion) and one case of exploratory incision in the sixth month of pregnancy, we have fourteen abdominal sections without a death. Adding to this series the two cases done with a solution of 1 in 150, the twenty cases with the one per cent. solution (neither of these being germicidal), and one oöphorectomy, we have thirty-seven abdominal sections with only two deaths; or only one (from shock) out of the last thirty-four, a mortality of 2·9 per cent. Taking into consideration also the fact that I have used the ice-cap only once in this series (and then with the result of producing what it was intended to prevent), I think I have reason to be satisfied with "modified Listerism."

P.S.—Since the above was written I have discontinued the spray, and in this I have the satisfaction of being accompanied by no less an authority than Dr. Keith, who has returned to his old system, pure and simple, and with the best results.

Granville-place, Portman-square, W.

ON

ADHERENT PERICARDIUM OF RHEUMATIC ORIGIN, WITH CASES.

BY A. G. BARRS, M.B. EDIN.,
RESIDENT PHYSICIAN TO THE LEEDS INFIRMARY.

(Concluded from p. 501.)

I AM of necessity compelled to enter at greater length into the question whether the myocarditis which ever accompanies inflammation of the pericardium is not in itself quite sufficient to explain the dilated condition of the ventricles. Now, in all the cases there was considerable and even great increase in the weight of the organ, and that increase was obviously due to the great amount of tissue in the heart's wall. This must clearly have been the result either of a true hypertrophy of the muscle or of the effusion of inflammatory material in some form or other. We must assume that whatever inflammatory material was present was thrown out in the early stages of the disease, and had gone on to a condition of more or less organisation. The cases were all of many months' duration; and consequently, if there had been much new tissue of inflammatory origin present, the muscular structure must have suffered considerably by its long-continued influence. Though in only one case, unfortunately, was a microscopic examination of the structure made, it never occurred to me that the muscle presented an appearance that all would not admit to be healthy, or nearly so. I need scarcely say that in the one case the microscope confirmed the opinion;—in short, it scarcely admits of doubt that conditions of hypertrophy and inflammation of muscle are entirely antagonistic. I cannot but conclude that, whatever else might have to do with the causation of the ectatic condition, the myocarditis had nothing but the production to a greater or less degree of a primary and acute dilatation of the ventricles.

Although lesions of the valves were found in every case, they were so minute in extent and obviously of so short duration, that it would be admitted at once that they could have played no part whatever in the process. The opaque condition of the endocardium and valve-folds I am inclined to attribute to the long-continued dilatation, in the same manner as pointed out by Dr. Goodhart in cases of chlorosis.

CASE 1.—Elizabeth W——, aged sixteen, was admitted under Dr. Clifford Allbutt's care on Sept. 26th, 1879. She had been in the hospital eighteen months before for an attack of acute rheumatism, and had suffered from dyspnœa ever since. She was at that time supposed to be the subject of double aortic disease. When admitted on Sept. 26th she was suffering from slight rheumatic inflammation of one or two large joints, great dyspnœa, with intense œdema of the

lower parts of the body. There was a much increased area of cardiac dulness, with intense thumping action of the heart, so that the whole body was shaken with each systole. Bruits pointing to mitral regurgitation and double aortic disease were present. The radial pulse was most markedly regurgitant in character. Under treatment she improved somewhat, but was always worse when taking digitalis. Ultimately both the pleural and peritoneal cavities became the seats of effusion. On Nov. 7th she jumped out of bed with a shriek, and fell dead upon the floor.

Autopsy.—Œdema of legs. There was considerable effusion in the peritoneal cavity. Both pleural cavities contained a fair amount of fluid.—Heart: The pericardium was universally and tolerably firmly adherent to the surface of the heart. The pericardial cavity was completely obliterated. The membrane could be entirely separated with a moderate amount of force, leaving the surface of the heart covered with shaggy fibrinous material. The heart, when stripped, weighed 31 oz., and was much enlarged. The enlargement was mainly due to hypertrophy and dilatation of the ventricles, especially the left. The cavity of the left ventricle was large enough to lay one's fist in with ease. The musculi papillares were enormously increased. The ventricular wall was twice its natural thickness even in this greatly dilated condition. The mitral orifice admitted five fingers easily. The mitral valve was thickened and opaque to some extent, but otherwise showed no signs of disease. The left auricle was much dilated, and its walls thickened. The aortic valve on the removal of the heart from the body proved to be quite competent to the ordinary water test. The segments were much stretched downwards into the ventricle, and, like the mitral valve, although not distinctly diseased, were much thickened and opaque. The right ventricle was not much dilated. The right valves were healthy. The aorta and pulmonary artery were healthy. The liver, kidneys, and spleen were enlarged and indurated, as is usually seen in long-standing cases of mitral disease.

CASE 2.—Alice W——, age twenty, was admitted under the care of the late Dr. Heaton, on March 23rd, 1880. She had been in hospital eighteen months previously with an attack of acute rheumatism, lasting eight weeks, followed by dyspnœa on exertion. Six weeks before admission, on March 23rd, the present attack of acute rheumatism commenced. On admission the right knee and right wrist were swollen and painful. Temperature 102°. Heart: Visible pulsation in fourth and fifth left interspaces on mammary line with some heaving of chest-wall. Apex beats full and strong over an increased area in fifth space four and a half inches from middle line. Area of dulness increased, especially laterally and towards right. Action regular but rapid. At apex a distinct systolic bruit and other indeterminate sounds. At base marked double aortic bruit. Pulse markedly regurgitant and audible at three inches from ear. She died quite suddenly, on April 21st. There was great dyspnœa, with œdema throughout. Digitalis was administered in fairly large doses without any beneficial effect.

Autopsy, twenty-four hours after death.—On removing sternum there was no adhesion of under surface to pericardium. The pericardium was seen to occupy a much greater area than usual, especially in the transverse diameter. On incision it was found to be universally adherent to surface of heart. The adhesion was moderately firm, and could be scraped through easily with handle of scalpel in all parts. About the base and auricles it stripped much more easily, and thickish layers of fibrin could be easily torn from the surface of heart. (It was at this point only that the question arose of there having been any recent pericarditis, the main, if not the whole, lesion being obviously the result of the previous attack of rheumatism.) The surface of heart had a ragged, bruised appearance. Heart weighed 31 oz., much enlarged. All cavities dilated. Right ventricle hypertrophied to twice its natural thickness. Endocardium opaque in parts. Pulmonary and tricuspid valves healthy. Left ventricle much dilated, and walls twice its natural thickness, if not more. Musculi papillares much enlarged. Endocardium much thickened, and in parts opaque. Aortic valves permitted free flow of water into ventricle from aorta. The cusps of valve were thickened and opaque, especially along their borders, and had the appearance of having been stretched downwards into ventricle. No evidence of recent valvulitis. Mitral orifice much dilated, sufficiently so to admit five fingers easily. The mitral valve thickened and opaque, but otherwise normal. Aorta and pulmonary artery healthy. Solid viscera showed usual change of cardiac disease.

CASE 3.—Elizabeth J——, aged sixteen, was admitted under Dr. Churton's care on July 22nd, 1880. She had had rheumatic fever some few years previously. Admitted pale, breathless, and œdematous, and usual symptoms of severe mitral disease. The physical signs were anomalous throughout, but generally speaking were rather those of mitral than of aortic disease, a diastolic thrill with a double apex murmur being tolerably constant. She continued to get worse up to Sept. 22nd, when she died somewhat suddenly.

Autopsy, eighteen hours after death.—Body generally œdematous; abdomen distended; deep excavated sores on each instep, the result of sloughing induced by the introduction of Southey's trocars at this point. On opening the chest the pericardium was seen much distended, occupying the greater part of the anterior view. Lungs shrunken. Pericardium closely and firmly adherent to heart; pericardial cavity entirely obliterated; membrane much thickened, but with some difficulty could be separated from the walls of the heart, leaving them covered with a coating of œdematous fibro-gelatinous-looking tissue, especially thick about the auricles and roots of the great vessels; pericardium itself much thickened and œdematous. Heart much enlarged, weighing 24 oz.; all cavities flaccid and dilated. Right ventricle dilated and flaccid; walls in this condition do not appear to be obviously hypertrophied; all valves healthy and competent. Left ventricle dilated; walls hypertrophied to twice their natural thickness. Endocardium thick and opaque; papillary muscles large and fibrous at their apices; mitral valve competent, admits three fingers only; flaps thickened and indurated along the free margin, but quite smooth (thickening not in all probability sufficient to hamper movements); aortic valves thickened and opaque, but competent to water test; aorta, pulmonary, and coronary arteries healthy.

CASE 4.—Joseph B——, aged fourteen, was admitted under Dr. Eddison's care on March 11th, 1881. He had had three attacks of acute rheumatism, the first not earlier than two years ago. For the last attack, which occurred in December, 1880, he was an inmate of the hospital. At this time no signs of pericarditis were observed, but there were evidences of some serious cardiac lesion of an obscure nature. On admission on March 11th the cardiac impulse was diffuse, and increased in force. Apex not found. On auscultation a loud rasping systolic bruit was heard at apex (usual site), and could be traced into axilla, but not to angle of scapula. He died somewhat suddenly on March 22nd.

Autopsy, thirty hours after death.—Surface of body pale. Legs œdematous to a moderate degree. Both pleural cavities contained a small amount of serum. The distended pericardium occupied quite half of anterior of view of chest, and measured at its broadest part six inches. External surface had an opaque reddish injected appearance, and was coarse in texture. There were a few adhesions to visceral pleura about base of large vessels. One or two much enlarged lymphatic glands were adherent to anterior surface. There was no pathological adhesions to anterior chest-wall. The pericardial cavity was practically obliterated by adhesions of varying consistence, most of them soft enough to break down easily under the finger, but leaving the adjacent surfaces much roughened and altogether unnatural. Some small amount of blood-stained fluid was confined in the interstices of this tissue. The pericardium itself was much thickened, and in parts blood-stained, but still soft and pliable. The heart (stripped) weighed 21 oz., much enlarged by dilatation of all cavities; walls of ventricles bore natural relation to each other as regards thickness. There was no marked hypertrophy to be observed in their extremely dilated condition, but probably the amount of muscular tissue was above the average. (Considerable increase in weight would be accounted for by adventitious tissue attached to surface.) Muscle a little soft but good in appearance; no fibroid or fatty change visible to naked eye. The valves: There was a very delicate fringe of granulations along each curtain of aortic valve, but in no way likely to impair its function; the anterior flap of mitral valve was opaque.

I have avoided reproducing in detail the clinical reports of the cases, as to do so would only increase the length of the paper without commensurate advantage. I had at one time thought that the cases would enable me to give some help in the diagnosis of this very striking but complex condition, but further experience has led me to abandon my earlier views, and so far as the clinical phenomena are concerned I have but one observation to make. In my experience I

have rarely seen a case of ordinary valvular disease, either aortic or mitral, in which great benefit has not followed the administration of digitalis; in the cases before us it signally failed to improve the symptoms; indeed, it seemed rather to aggravate them. I have sometimes thought that it may have been from the observation of such cases that the very curious doctrine, still, I believe, taught by some, of the dangers of digitalis in aortic disease came into existence.

In conclusion, I have to thank the physicians to the infirmary for their great kindness in permitting me to make use of the cases.

ERRATUM.—In the former part of this article, published last week, the word "ectatic" is twice wrongly printed "ecstatic."

ON PSORIASIS FROM BORAX.

BY W. R. GOWERS, M.D., F.R.C.P.

AMONG the cutaneous eruptions which may result from the administration of drugs, psoriasis has not, I think, been hitherto included. The following facts show that an eruption of characteristic psoriasis may result from the internal administration of borax. The facts have been met with in the use of borax in the treatment of obstinate cases of epilepsy, in which bromide fails. The first instance was in the case of a man who had taken borax for nearly two years in doses of first fifteen grains and then a scruple three times daily. An eruption of psoriasis made its appearance on his limbs and trunk, developing to a considerable extent in the course of a few weeks. Five minims of arsenical solution were added to each dose of borax, and the eruption rapidly disappeared. Shortly afterwards Dr. Spencer of Clifton, in mentioning to me a case of epilepsy in which he had given borax with advantage, inquired if I had met with any inconveniences from its use. I told him of this case, in which I thought it possible that the psoriasis was produced by the borax, and he informed me that in his patient the same eruption had just appeared. In this case also the rash rapidly cleared away under the influence of arsenic, and a few weeks later Dr. Spencer wrote to me, "I have not the slightest doubt that the borax caused the psoriasis, or that the arsenic cured it." A third instance has lately come under my notice. The patient was a young man who had suffered from epilepsy since infancy, and was always rendered worse by bromide, so that he was brought to me with the request that bromide might on no account be given. He took borax, first fifteen grains and then a scruple three times a day, with greater benefit than had resulted from any previous treatment, and after eight months an eruption of psoriasis appeared. Arsenic was added, but the result of treatment has not yet been ascertained.

The eruption in these cases occurred on the trunk, arms, and legs, but more on the arms than elsewhere. The face was free. It was located on both the flexor and extensor aspects. The patches varied in size, up to an inch and a half in diameter. Their appearance was quite characteristic, but the scales were not so thick as they sometimes are in ordinary psoriasis. In no case was there a history of syphilis, and in Dr. Spencer's patient syphilis could, with certainty, be excluded.

PRESENTATIONS.—Last week Dr. Richard Budd, Physician to the North Devon Infirmary, was presented by Earl Fortescue, on behalf of the citizens of Barnstaple and many other friends in the county of Devon, with a portrait of himself and a cheque for £400. The testimonial was given in acknowledgment of the long and valuable services rendered by Dr. Budd to the infirmary, and also as a mark of the personal esteem in which he is held by the donors. In returning thanks, Dr. Budd hinted at his resolve to devote the sum he had received to the carrying out at a future time of a plan which had long occupied his thoughts—viz., the erection of a detached building for the work of the out-patient department.—A case of surgical instruments has been presented to Mr. A. O. H. Phillips, L.R.C.P. Lond., by the medical practitioners resident in Swansea, on the occasion of his leaving that town for Australia.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

GUY'S HOSPITAL.

INNOMINATE ANEURISM; LIGATURE OF LEFT CAROTID; ARTERITIS DEFORMANS OF AORTA; ŒDEMA AND GANGRENE OF THE LEFT LUNG; DEATH.

(Under the care of Mr. BRYANT.)

FOR the notes of this case we are indebted to Mr. Morris.

Alfred T——, aged forty, was admitted into Job ward on March 17th, 1880. He belonged to the horse artillery, and had been in India. Nine months before admission he had rheumatism, and had severe pain in the right shoulder after. A month before he entered the hospital he first noticed a swelling which became painful, especially when he coughed. There was no history of syphilis.

On admission, there was a large pulsating swelling extending from the middle of the right clavicle to about the inner fourth of the left, upwards as far as the thyroid cartilage, and downwards as far as the third rib. The larynx was lying far to the left, causing irritation and much coughing. He could not swallow anything hard. The right pulse was weaker than the left. The chest was normally resonant; the heart sounds were normal, and the pupils equal. Pulsation could be felt in the tumour and extending in both posterior and anterior triangles from the trapezius down to the lower border of the second rib, and very slightly to the level of the third rib. Transversely, the pulsating swelling measured 3¾ in.; from posterior border of one sterno-mastoid to the other 8½ in.; the circumference of neck over most prominent part was 18½ in. The external jugular vein was distended, as were the veins in the base of the posterior triangle. The veins of the arm were also slightly full. There appeared to be no difference in the radial arteries. Just above the tumour the carotid could be felt pulsating, and pressure on this caused the pulsations in the tumour to fall from 80 to 72. This only lasted for one-sixth of a minute, the pulsations were then increased.

On March 26th, at 11 A.M., under chloroform, the left common carotid, which was felt to pulsate near the posterior border of the sterno-mastoid, was ligatured. The incision was made external to a greatly distended external jugular vein, the muscle was turned up, and the internal jugular vein was compressed. One or two large veins were divided, and considerable hæmorrhage took place; but these were presently secured with silk ligatures. The nerve was seen, and raised from the artery, and the artery was then secured with a catgut ligature. At 6 P.M. the patient was quiet; he had no pain, but complained of pressure on the windpipe, and of the apparent accumulation of phlegm. Pulse 100, temperature 97°. The local character of the swelling was unaltered. On the 27th there was no alteration in the swelling. The patient had a bad night. On the 28th the pain in the shoulder had entirely subsided, but the pulsating surface had in no way decreased. On the 29th a choking sensation prevented sleep. The point of greatest prominence appeared to have advanced upwards, and on the following day the patient was in great distress, and could not speak above a whisper. There was severe pain over the left intercostal spaces, and the air did not easily enter the left lung.

On April 2nd the diet consisted of arrowroot, beef-tea, milk, moistened toast (at times), and an enema was given every two hours containing about two minims of tincture of opium. On the 10th there was a good deal of œdema around the aneurism, and the veins were rather prominent. Next day the tumour had very greatly increased in prominence. The skin was of a deep, dusky red, and extended all round the rest of the neck, and over the most prominent part was a bulla containing a dark fluid, in which was seen a wave movement with each pulsation. Over the surface were

several white points, slightly elevated, and apparently like small pustules. On the 14th he died quietly at 5.15 A.M.

Temperatures: March 27th, 101·1°; 28th, morning 97·4°, evening 98·2°; 29th, morning 98°, evening 99°; 30th, morning 98·8°, evening 99°; 31st, 100·2°. April 1st, 99·7°; 2nd, 99·2°; 5th, 100·8°; 6th, 99·2°.

Necropsy — Brain: Healthy, no signs of disturbance of cerebral circulation due to ligature. Lungs: Both bulky and œdematous. This condition reached its maximum at the left base, where a patch, the size of a palm, was breaking down into a homogeneous offensive pulp. Larynx: No obvious signs of pressure. Heart: Weight, twelve ounces, healthy. Vessels: Within half an inch of the valves the aorta was affected with rather an extensive degree of arteritis deformans, being pouched and undulating, and much wider than natural. This condition extended to the very end of the aorta, and at one spot near the commencement of the descending aorta the vessel showed a small aneurismal pouch. The orifices of the left carotid and left subclavian arteries were natural, but that of the innominata was much increased in circumference, admitting the thumb. Its margin was also thick and rounded. It led straight into a large aneurismal sac bigger than a cricket ball. This had thin walls in front, where the skin formed a dry eschar over it. It had destroyed the inner end of the right clavicle and the sterno-clavicular joint. It had some brown-paper-like clot lining its anterior part, but separating from the wall there by a little recent black clot, formed of blood, which had wedged its way in between them. In the posterior wall of the sac, about half an inch above the aortic orifice of the innominata artery, was an aperture leading up into the undilated upper part of the artery which gave off the carotid and subclavian as usual. The other organs were healthy.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

ANEURISM OF THE SUBCLAVIAN AND AXILLARY ARTERY TREATED BY GALVANO-PUNCTURE.

(Under the care of Mr. RANSFORD.)

FOR the following notes we are indebted to Mr. Davies, house-surgeon.

C. R——, a seaman, aged sixty, was admitted into Derby ward on October 21st, 1879. Two years before he fell and injured his left shoulder; was laid up for some time. No dislocation or fracture occurred, and he quite recovered from the effects of the fall. Nine weeks before admission he noticed pain for the first time in the left shoulder. He was treated as for chronic rheumatism with liniments. About two weeks ago he noticed a swelling for the first time under the clavicle; he also noticed that his hand and fingers tingled and felt numbed; his left arm was also colder than the right, and had shooting pains down the arm. These symptoms gradually increased, and the swelling got larger and the arm became weaker. There was no history of syphilis.

On admission, he presented the appearance of a fine, healthy-looking man, with a good colour. He had a pulsating tumour beneath the left clavicle, extending from the left clavicle downwards a distance of four inches; prominence could easily be seen. On auscultation, a loud bruit was heard from the clavicle to below the level of the tumour; no bruit was heard over the cardiac, or any other region of the body. The left shoulder and arm were œdematous, and colder than the right; and there were shooting pains down the left arm, and over the shoulder-blade numbness and tingling of the fingers. The fingers of both hands were clubbed, more marked in the left. Pulsation extended above the clavicle. There was no headache; patient felt giddy at times; sight of both eyes good. The pulse in the left wrist was much quicker and weaker than in the right. Sphygmographic tracings showed pressure on the main artery of limb on the left side; also signs of general arterial degeneration. Urine normal. Left arm ten inches round; right nine inches. Ordered iodide of potassium, five grains three times a day, and hypodermic injection of morphia, one-fifth of a grain at night.

Oct. 27th.—Diet full; no alcohol. Condition the same as on admission. To go on with iodide of potassium, and have a hypodermic injection of three grains of ergotine every day. On the 29th, the ergotine left off, as it seemed to have produced no effect beyond causing a blush to appear at the place of injection.

November 5th.—The tumour seemed to be rapidly increasing in size; it now measured six inches vertically from the top of the clavicle to the lowest point, and four inches transversely. Thirty grains of iodide of potassium were given three times a day. Pulse and temperature were about normal. In the afternoon two insulated needles connected with the two poles of a constant current battery were introduced into the tumour; ten cells were employed. The needles were kept in for rather more than thirty minutes, whilst the man was under the influence of ether. He vomited three or four times after the operation; during the afternoon and evening the pain in the shoulder was about the same as before. Ice applied to the tumour. On the 6th, the pulse was 84, temperature 97°. He had a fair night. Pain in the shoulder no less. No apparent change in the size and consistence of the tumour; pulsation in it and the radial quite as strong. No redness round the needle punctures. No headache. On the 7th he passed a good night after hypodermic injection. Solid feeling around both punctures and tumour, otherwise it appeared the same. Pulsation quite as strong. He went on in this way without much change till the 15th, when two needles were introduced, about three inches in depth; fifteen cells were used, for about forty-five minutes. Ice omitted. Pulse in the evening 112, temperature 99°. Pulse and temperature remained about the same till the 18th, on which day the pulse was 120, temperature 98·4°; 19th, pulse 110, temperature 98·4°. On the 20th the pulse was 116, temperature 98·6°. For the last few days there had been great numbness in the hand. Hand and arm swollen and powerless. Red blush over arm. The tumour was in the same condition; no signs of consolidation. Pain was very severe at the back of the shoulder-blade at night. He took food fairly well. Evening, pulse 130, temperature normal. Ordered one grain of extract of opium every four hours, as the hypodermic injections caused irritation of the skin at the point of insertion. On the 22nd there was puffiness round the shoulder and axilla; arm still painful. Pills fail to relieve. Pulse 120, temperature 99·2°. On the 26th he had severe pain during the night, and this morning at the lower border of pectoralis major. Swelling in axilla extending down the side. Ordered fifteen grains of chloral hydrate and twenty grains of bromide of potassium at bedtime. Arm strapped to the side. Pulse 120, temperature normal.

December 3rd.—Restless during the night, shouted and got out of bed; quite awake at the time. In the morning pupils were not equal, left smaller than right, neither acted well to light, sight of left eye not so good as right. Pains in arm and shoulder not so severe as usual. Tumour still increasing. Has slight cough. On the 4th the operation was repeated with twenty cells without much hope of doing any good as only negative results had followed the former operations, but the good results obtained by Dr. John Duncan of Edinburgh encouraged another trial. For a day or two the tumour felt firmer, but this was only transient and all melted away again. On the 9th the chloral was increased to twenty-five grains at bed time, pain was very severe and without chloral he was very restless. The tumour was gradually increasing. On the 17th the house-surgeon reported that there was no pulsation in the tumour, and he feared rupture of the sac of the aneurism. On examination pulsation was hardly to be felt, the tumour was more diffuse; no pulse could be felt in the left radial; pulsation felt best at the inner side of the tumour, elsewhere hardly to be made out. Ptosis of left eye. Left pupil still contracted more than right. The arm was very œdematous, small gangrenous spots were visible on the back of the hand and knuckles, small slough over spine of scapula, loss of sensation three inches above the elbow. Intercostal spaces filled out on expiration, sank in on inspiration. Breath-sounds were heard all over the chest. Left side of chest was very much flattened. Temperature 101·2°, pulse 124. In the afternoon he had a sudden attack of dyspnœa with profuse sweating. This passed off in about an hour. On the 18th he was delirious during the night; in the morning the breathing was quiet; no delusion; pulse felt again in the left radial; in the evening he had severe pain, and was ordered twenty minims of sedative solution of opium at once; pulse 100. Temperature: morning 96°, evening 100°. On the 19th he passed a fair night; less pain this morning; the skin in axilla red and inflamed; not much change in the tumour since the 17th, beyond that the skin was more distended, and the blood seemed to be finding its way under the skin down the side of the chest; no change in pulse and tem-

perature. On the 20th a bleb formed on the front of the wrist; the hand looked very dusky; the patient appeared brighter. Pulse 100, morning and evening. Temperature: morning 99·4°, evening 101°. On the 24th, the house-surgeon reported that in the morning oozing of bright arterial blood took place from the axilla; parts very sloughy; stopped with a pad of lint steeped in a solution of perchloride of iron, and on moving the patient a large stream of dark blood jutted out from the slough over the scapula; this was also stopped as above, and with tenax. When the patient was seen in the afternoon he was manifestly *in extremis*, and died the next day.

Necropsy, the day after death.—It was noticed that the chest-walls at the upper and outer part were very much pushed in, but there were no signs of any absorption or erosion of the ribs. On carefully dissecting the tumour it was found to involve the whole of the third portion of the subclavian, and the first and second parts of the axillary artery. On dividing it vertically it measured seven inches in diameter in its long axis, and four and a half antero-posteriorly. The anterior portion of the sac was lined with laminated clot, varying in depth from one to two inches; this in one or two places had broken down and formed small abscesses, apparently at the points of puncture; the sac had given way at the lower portion, and communicated with the slough in the axilla. Posteriorly the aneurism extended back to the scapula, and the tissues behind were infiltrated with dark blood, but there did not seem to be any rupture of the sac in this direction, and there was no direct communication with the slough over the scapula. The aorta and the larger vessels were atheromatous, but the other organs of the body seemed as sound as could be expected in an old man of sixty.

Remarks by Mr. RANSFORD.—It was only after many consultations with my colleagues that I decided to try galvano-puncture. The only other alternatives seemed to be to leave him to his fate, or amputation at the shoulder. Dr. John Duncan, in a paper published in the *Edinburgh Medical Journal*, April, 1866, gave fifty cases treated by galvano-puncture, of which twenty-three were cured. These results inclined me very strongly to give it a trial in this case, but I think the lesson it teaches is that in an aneurism of such magnitude galvano-puncture alone is not enough. I should in any similar case be disposed to recommend amputation about the shoulder as a preliminary step, and combine it afterwards if necessary with galvano-puncture; or, as in Mr. Heath's plan (see THE LANCET, Jan. 31st, 1880, page 168), the simple introduction of plain steel needles, which were left in some time. This case also illustrates some of the drawbacks so well stated by Dr. Duncan—namely, that, "1st. It is inherently uncertain, liable to cause relapse by the melting of the coagulum, or inflammation by its sudden deposition. 2ndly. It is very liable to set up inflammation in the walls and contents of the sac and surrounding tissues."

Reviews and Notices of Books.

The Principles and Practice of Surgery: being a Treatise on Surgical Diseases and Injuries. By D. HAYES AGNEW, M.D., LL.D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Vol. II. Philadelphia: J. B. Lippincott & Co. 1881.

IT is often quoted as a truism that surgery has within the present century, or during the last generation, so expanded that it is no longer possible for one man so to master it all as to be qualified to teach or practise it in all its departments. Dr. Agnew is making a bold attempt to show the fallacy of this. Three years ago he published the first volume of his work on Surgery, consisting of over 1000 large and closely-printed pages, and now we have received the second instalment of equal size, while the third and concluding volume is promised us shortly. It is impossible not to admire the industry and energy that can alone enable an active practitioner, hospital surgeon, and teacher to undertake and accomplish such a herculean task. Whether this is the best way to expend such valuable forces is, however, quite another question. Of the first volume we were able to speak in laudatory terms, and the second is of high merit, though hardly equal to its predecessor. There is no article or chapter that we can point to as a failure, or even perhaps as poor, but yet there is throughout the whole less display of that thorough mastery of the subject and of deep and wide research that were evident in the first volume. Before entering into details we feel bound to remark that one serious drawback to the practical value of the book is the curious order in which the various subjects are treated—a feature which makes it less useful as a work of reference than it otherwise would be. The contents of this volume, for instance, are thus arranged, dislocations, diseases of joints, excision of bones and joints, minor surgery, general considerations with regard to operations, anæsthetics, amputations, shock, traumatic fevers, phlegmon, erysipelas, diseases and injuries of the genito-urinary organs, surgical diseases of women, surgical affections of the spine and back, and surgical diseases of the mouth. It is most inconvenient to have the surgery of the abdomen in one volume, and the surgery of the mouth, pharynx, and œsophagus at the end of the next. And why the chapters on wounds and surgical dressings should be far separated from those on minor surgery, shock, traumatic fever, anæsthetics, and the general considerations in regard to operations, is beyond our ken.

The pathology of the various forms of arthritis is not described so fully and carefully as the subject merits, and no very clear opinion as to the first tissue attacked is given, for while arthritis when of local origin is said to commence in the synovial membrane, and, when constitutional, to start in the bones, cartilages, or ligaments, coxalgia, which is stated to be of constitutional origin, is yet spoken of as commencing in the synovial membrane. Dr. Agnew describes, under the name of spontaneous arthritis, those cases which are familiar in this country under the designation of senile struma. The change of name is hardly happy, as "spontaneous" is with doubtful propriety applied to any disease. The whole subject of secondary hæmorrhage after operations is dealt with far too briefly, and the treatment is dismissed in one short paragraph. As this is a complication which causes extreme anxiety and requires prompt and wise treatment, the student and practitioner might fairly look to have its forms, causes, modes of prevention, and treatment fully discussed, especially when the line of treatment recommended is not in harmony with generally accepted doctrines, and is so open to argument and criticism as is the ligature of the main artery of the limb above the wound in secondary hæmorrhage after amputation. Among other points we have noticed is the absence of any mention of the various British appliances for administering anæsthetics: thus Dr. Agnew advises the use of the old-fashioned cone for ether. In the list of circumstances requiring amputation no mention is made of subcutaneous rupture of an aneurism, while the list includes hospital gangrene. In describing the treatment of a lacerated urethra by perineal incision, Dr. Agnew does not state that the central end of the completely ruptured urethra may not be found among the infiltrated and bruised tissues, and he of course gives no directions as to how to proceed in such an emergency. Gonorrhœa is described as a specific inflammation of the urethra, and as distinct from simple urethritis, although most recent authors have, we think with good reason, abandoned this view. In speaking of the treatment of spina bifida by injection of iodine no mention is made of Dr. Morton's results, or of many isolated cases reported by other surgeons. The last point we would notice is the cause assigned for the early traumatic fever which occurs during the three or five days following an injury. We are told that "the vitality of the damaged tissues is destroyed to some extent, and these devitalised fragments undergo decomposition, while around them there is taking place the rapid tissue-change incidental to an inflammatory process. ..... The admixture of this sewage with the blood so alters the quality of the latter that it

becomes an irritant to the cardiac ganglia, thereby exciting the heart's action; and the rapid interchange of tissue, referable to the inflammation, is attended with the production of an unusual amount of heat, which explains the high temperature." It is difficult to understand how Dr. Agnew could have penned these words, for none can be more familiar than he with the fact that this primary wound fever occurs after simple fractures and other injuries without external wound, in which no "decomposition" occurs. Still more strange is it when in the previous paragraph we are told that "there are many persons who on the reception of very slight injuries experience high constitutional disturbance, while others of a more phlegmatic and gross organisation endure severe injuries or operations with comparatively little disturbance of the circulation." If the fever were the result of increased local oxidation, the pyrexia must be the same in all cases of similar injury. It is strange to notice, too, how long-lived this fallacy of the local causation of inflammatory fever is. It is not uncommon for the general temperature to rise 4° after a limited injury; and were this solely the effect of increased local heat, the part would require to be at a white heat at least! We believe that all the evidence points to the conclusion that the primary wound or traumatic fever, which is never of serious import, save perhaps in some cases of abdominal surgery, is a result of the injury of the nerves of the part, a stimulus paralysing the heat-governing centre being transmitted to the medulla oblongata. But here we must leave this volume, which, although containing blemishes such as those above pointed out, must still be characterised as a work of great excellence. The illustrations are very numerous and distinct, and are of great assistance in explaining the text.

The Micrographic Dictionary. A Guide to the Examination and Investigation of the Structure and Nature of Microscopic Objects. By J. W. GRIFFITH, M.D., F.R.S., &c., and ARTHUR HENFREY, F.R.S., F.L.S., &c. Fourth Edition. Edited by J. W. GRIFFITH, M.D., F.R.S., &c., assisted by the Rev. M. J. BERKELEY, M.A., F.L.S., and T. RUPERT JONES, F.R.S., F.G.S. Parts I., II., and III. London: John Van Voorst. 1881.

THAT a fourth edition of this valuable work is now in course of publication may serve to some extent to show the ever-increasing numbers of those who, not being mere *dilettanti*, use the microscope as an instrument of research, and who are daily, although often obscurely, adding to our knowledge of the structure and functions of all classes of the animal and vegetable kingdoms. There is no doubt that the numbers and efforts of microscopists have been largely augmented and fostered by the formation of clubs and societies, which by bringing into contact the less with the more experienced observers, and encouraging free criticism, have not only increased the general knowledge of minute anatomy, but have probably prevented a great many false "facts" and immature observations from being launched upon the scientific world. Methods of investigation or manipulation can be very much better learnt at one of these societies than from any printed instructions, and thus it happens that the ordinary text-book of microscopy is in but small demand. Something more encyclopædic in scope is necessary to the modern student, and this want is intended to be supplied by the Micrographic Dictionary. We think the publishers have done wisely to issue the new edition in monthly parts, the first three of which have appeared. An introduction of twenty-six pages is devoted to descriptions of the instrument and the more important accessory apparatus. This, perhaps, might have been spared, as it is far less complete than may be found in the ordinary manuals—say, for instance, Carpenter's or Beale's, with which the possessor of a microscope is most likely furnished. Moreover, a detailed description of each appliance will be found under its appropriate heading in the body of the work. Bibliographical references are placed at the end of each article when necessary, and this is not the least useful feature of the work. The plates appear fairly good and sharp, but, as perhaps is unavoidable, rather crowded, from the immense number of figures required. The woodcuts in the text are for the most part admirable. Care seems to have been taken in the general getting-up of the work. As showing how far the text has been brought up to recent date the bibliographical references take in papers of the present year. The new edition is to be heartily recommended to the notice of all microscopists.

A Manual of Dental Surgery. By ALFRED COLEMAN, L.R.C.P., F.R.C.S., L.D.S. pp. 342, with Illustrations. London: Smith, Elder, and Co.

IT is always a thankless task to bestow blame, but a great pleasure to give praise where praise is due, and Mr. Coleman is certainly entitled to this for the careful collection he has made of what has already been written on this subject by himself, and chiefly by other writers, such as Messrs. J. and C. S. Tomes, Salter, Cartwright, and Taft.

A volume is produced which is intended to be useful to the medical as well as to the dental student, and it therefore contains much information on infantile diseases depending on dentition, and this chapter is one of the best in the book. Mr. Coleman very justly insists on two points of importance with regard to the regulation of teeth, and recommends, as a general rule, that extraction, as a cure for irregularity of the teeth, should not be practised until after the second molars are erupted. He also writes very strongly, and in our opinion not at all too emphatically, against the common practice of removing temporary teeth before their time to make room for the permanent ones, and he points out that this should not be done in the lower jaw, except for the immediate successor—that is to say, a temporary canine should not be removed to make room for a permanent lateral incisor.

In the chapter on Fractures of the Jaws, we are sorry to find that the excellent work of Mr. Moon in Bryant's "Surgery" is entirely ignored, and a drawing is given of Hammond's wire splint at which the inventor of this admirable appliance would be rather astonished, for the thin wire which he used in separate pieces for each tooth, is here depicted by Mr. Coleman in one long piece, most ingeniously, but quite impracticably, twisted in and out. The chapters headed Anæsthesia and Periodontitis are very graphically written, and in the latter the old custom of *not* removing an aching tooth when the surroundings are inflamed is energetically denounced and immediate extraction recommended. No mention is made of the curious separation which often takes place between incisor teeth without obvious cause, and herpes of the gums is not alluded to though it is by no means uncommon. The account of the author's experiences in replantation and transplantation is of much interest, as containing a record of good original work. Various internal remedies are recommended for hæmorrhage after extraction of teeth, also for idiopathic neuralgia, when the dental surgeon has failed to find any obvious tooth irritation.

We regret that Mr. Coleman should advocate the internal administration of such drugs as arsenic, bromide of potassium, chloride of ammonium, and gelseminum by dental surgeons. Occasions must be rare when it is justifiable for a specialist in surgery to practise as a physician, unless he is prepared to become a visiting general practitioner, and to be ready for all the results which may follow the empirical administration of, say, bromide of potassium.

MR. F. MARSHALL, of the third district of the West Ashford Union, has received (for the fourth time) the Government gratuity for efficient vaccination.

Analytical Records.

MATHER'S PLASTERS.

WE have received from Messrs. Mather, of Hulme, Manchester, a series of plasters having india-rubber for the adhesive basis. They are simple surgical adhesive plaster, capsicum, belladonna, mustard, and strengthening plasters, the last being also supplied in the form of porous plasters à la Alcock. They are supplied in a convenient form, in rolls, so that any required length can be cut. These plasters will be appreciated by those who like the india-rubber basis. We doubt whether this will, however, come into general use, since it sometimes excites irritation in sensitive skins. Mather's mustard plasters are said to be prepared with mustard only. It is doubtful whether plasters can be made of pure mustard without so much of the volatile principle of the mustard escaping as to render the plaster ineffective.

PURTON NATURAL SULPHATED AND BROMO-IODATED SALINE WATER.

Purton is a small village in Wiltshire, on the Cheltenham Branch of the Great Western Railway, about six miles from Swindon and fourteen from Cirencester. Purton Spa or spring is two miles from the village at a place called Purton Stoke. The virtues of the Purton Mineral Water have been long known, but it is only within the last twenty years that a pump-room has been erected for the convenience of visitors. The water itself is clear and bright, and possesses very little odour or taste. It contains, however, sulphate of soda, magnesia, lime, and potash, and chloride of sodium, with a little iodide of sodium and bromide of magnesium. It is recommended in chronic diarrhœa, constipation, piles, gout, and rheumatism, in fact in all cases where a mild purgative and diuretic action is required. In chronic eczema and psoriasis it is said to effect a speedy cure. There is no good hotel accommodation at Purton, but as the water can be obtained in bottles that is matter of very little importance. The dose is a tumblerful at bedtime, and the same in the morning before breakfast.

WYETH'S COMPRESSED TABLETS FOR HYPODERMIC USE.

Our attention was called to these tablets at the International Medical and Sanitary Exhibition. They were made by Messrs. John Wyeth and Brother, of Philadelphia, at the suggestion of Dr. Wilson. Each contains a single dose of one or more alkaloids—morphia, atropia, &c.—triturated with a little sulphate of soda, so as to allow of compression into a pellet. They are very small, not larger than the head of a big pin, so that the quantity of sulphate of soda contained in each cannot exceed a quarter of a grain. They dissolve readily in water, affording a solution for hypodermic use. They are very handy, and are put up in small tubes, each containing a couple of dozen, so that a large number can be carried with the syringe in an ordinary hypodermic case. The sulphate of soda can by no possibility do harm, and may prove beneficial by assisting absorption. The idea is ingenious, and the tablets will be found most useful. We have given them a thorough examination and a careful trial, and we are convinced of their value.

THE ANDOVER AERATED WATERS.

These waters are of several different varieties, some being adapted for table use, whilst others possess purgative properties. They are all prepared from a very pure water supplied by the Andover Company, and drawn from the Hampshire hills. The simple aerated water is bright and sparkling, and is likely to become a favourite. The Glauber water is prepared from Glauber's salts, and contains two drachms to the bottle. The alkaline and acid aerated waters are novel, and will be found useful in dyspepsia and many affections of the urinary organs.

GERRARD'S EUCALYPTOL GUM BOUGIES.

These bougies are composed of a mucilaginous basis made antiseptic by the addition of eucalyptol, and medicated with iodoform, belladonna, opium, chloride of zinc, and other drugs required in the treatment of diseases of the urethra. They are quite flexible and are introduced without difficulty, giving rise to no pain or irritation. They take two or three hours to dissolve, so that the mucous membrane is thoroughly saturated with the medicament. They are about four inches long, and have the diameter of a No. 9 catheter. They are very useful in the treatment of gonorrhœa and gleet. They may also be used as nasal bougies.

New Inventions.

A NEW REFRACTION OPHTHALMOSCOPE

THE main features of this instrument, which has been devised by Dr. L. Webster Fox, Clinical Assistant, Moorfields Eye Hospital, are the toothed-wheel mechanism, the short focal length of mirror for direct examination, and the large combination of lenses. It has three mirrors, one plane and two concave, with focal lengths of eight centimetres and twenty centimetres respectively. The short focal mirror is set obliquely, and can be rotated to any angle. By direct examination the rays of light from this mirror are crossed in the lens of the patient's eye, consequently we do not have an inverted image of the lamp on the retina, but an evenly diffused brilliant circle of illumination.

In high degrees of myopia (above twenty dioptres), owing to the fact that the area illuminated becomes greater, due to the length of the eyeball, the illumination becomes fainter; sufficient light is retained, however, to see the most minute pathological change. If a more intense light is desired, the twenty centimetre mirror can be substituted.

The disc, which has a diameter of forty-two millimetres, has twenty-two apertures admitting ten convex and eleven concave lenses. Added to this is a segment of a disc with five apertures containing four lenses. By combination the following range of glasses may be obtained: +0·5, 1, 1·5, 2, 2·5, 3, 3·5, 4, 4·5, 5, 5·5, 6, 6·5, 7, 7·5, 8, 8·5, 9, 9·5, 10, 10·5, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22. −0·5, 1, 1·5, 2, 2·5, 3, 3·5, 4, 4·5, 5, 5·5, 6, 6·5, 7, 7·5, 8, 8·5, 9, 9·5, 10, 10·5, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 35. The lenses are brought forward by the toothed-wheel system. One wheel is set on the disc, a second between this and the third (or finger-wheel) lowest of all. They are all enclosed, only the milled edge of the third projecting far enough to allow its being rotated by the index-finger. Each lens is centred accurately with the hole in the mirror, by a spring action having its point of pressure on the peripheral edge of the primary disc. The discs and cap are held in place by one screw; by removing this all can be taken apart when necessary. The instrument is well balanced by a good-sized ivory handle, and packed in a small case. W. Ferrier, 56, Beresford-street, S.E., and P. Roulot, Paris, are the makers.

DR. W. COUSINS' ELASTIC CORD TOURNIQUET.

THE apparatus consists of an endless red-rubber cord, on the middle of which is threaded a ring with a cross-bar for attaching a pad if desired. One end of the cord is looped on to a brass clamp, and the other end is to be drawn through this clamp, which has an automatic action. The objects aimed at have been ease and simplicity of application—so that with one hand it might be tightened by a wounded person,—strength, and efficiency. Although

it can be applied with one hand, it is not *easy* to do so and to fix the catch securely, and if this is not done carefully the cord is not fixed, and a very slight force is sufficient to loosen it altogether. In drawing the cord tight the greater part of the force is expended in stretching the cord past the brass catch, and very little on the encircling part. The ring and crossbar add considerably to the weight and cumbersomeness of the apparatus, and are entirely unnecessary. Messrs. Arnold and Sons are the sole manufacturers.

ENTERIC FEVER IN INDIA.

NEARLY two years have elapsed since we brought under the notice of our readers a valuable contribution to the history of enteric fever among European troops in India, in the form of an extract from the Report of the Principal Medical Officer for the year 1877. This has been reprinted for the use of the army medical officers, along with an extract from the Surgeon-General's Annual Report for 1879, and brings down the information on the subject to the end of 1878. Both these documents were prepared for the Reports by Brigade Surgeon Marston, the secretary to the Surgeon-General. It is unnecessary again to go over the matter contained in the Report for 1877; our readers who are interested in the subject will find a *résumé* of it in THE LANCET for October 4th, 1879. It appears that in 1878 the prevalence and death-rate of enteric fever in the Bengal command were as follows:—

	Per 1000 of strength.	
	Cases.	Deaths.
Among officers ...	9·46 ...	2·36
,, soldiers ...	11·46 ...	4·78
,, women ...	2·09 ...	1·74
,, children ...	2·31 ...	0·49

From this it would appear that the disease is only slightly more prevalent, but twice as fatal, among the men as among the officers, while the women and children enjoy a very marked exemption as compared with both. Its prevalence was different in the different arms of the Service, the admissions in the Cavalry and Horse Artillery having been 17·86 and the deaths 7·72 per 1000 of the strength, while in the Field and Garrison Artillery and the Infantry the cases were only 10·73 and the deaths 4·36 per 1000. This difference in the two classes is not explained, but it seems to be deserving of investigation. The influence of age and of length of residence in India is illustrated by tables, from which the following results are taken:—

Age.	Per 1000 of strength. Cases.	Deaths.	Continuous residence in India.	Per 1000 of strength. Cases.	Deaths.
22 and under ..	33·17 ..	13·11	1 year and under	34·29 ..	13·35
22 to 24	18·68 ..	5·90	2 years ,, ..	16·60 ..	6·29
24 to 26	13·11 ..	6·47	3 ,, ,, ..	7·19 ..	3·16
26 to 28	6·73 ..	3·76	4 ,, ,, ..	11·32 ..	5·50
28 to 30	2·58 ..	0·46	5 ,, ,, ..	6·39 ..	2·79
Above 30	2·41 ..	1·25	Above 5 years ..	2·65 ..	1·32

These results fully bear out former observations, which showed clearly that enteric fever was a disease particularly affecting the young soldiers during the first two years of their service in India. The irregularity in the results among men in the fourth year of service is probably accidental, and will disappear when the numbers under observation are sufficiently large to give a correct average. To these tables, showing the relatively high rate of mortality from enteric fever among young soldiers, Dr. Marston appends an important caution. "It is necessary here to guard against a possible inference from these tables. While the young soldier newly arrived in this country exhibits this proclivity to enteric fever, his chances of contracting and dying of other diseases are much less than those of older and longer resident soldiers; in fact, the average expectation of life diminishes in this country, as at home, in proportion to age, only in a far higher ratio." In a subsequent part of the report Dr. Marston records an outbreak of fever in the 30th Regiment at Ranikhet, and the 40th at Chaubattia in its immediate vicinity, the 30th being a newly arrived corps, and the 40th having been seven years in the country. In the 30th the cases were enteric, the diagnosis being verified by post-mortem examination, while in the only fatal case in the 40th the intestine was found to be perfectly healthy.

In considering the causes to which this proclivity to enteric fever of the young, and especially the newly arrived soldier, is attributable, it must not be forgotten that "he is placed under entirely new physiological conditions in regard to climate, food, and mode of life." To ascertain whether the date of arrival occurring at the beginning or end of the cool season had any influence on the development of enteric fever, a table was drawn up showing for the five years 1871–5, the mortality by this disease among a body of men arriving in India in October–November, as compared with a similar body landing in March–April. The result was that the former had in the first year of service 15·1 cases and 6·09 deaths, and the latter 15·5 and 7·27 per 1000 of the strength; and in the second year of service, the first had 5·1 cases and 1·49 deaths, and the second 8·0 and 3·34 per 1000; so that there was a slight exemption in favour of the earlier date.

In discussing the relations of ague to enteric fever, and the recently introduced term typho-malarial fever, as designating a mixed or hybrid form of the disease, Dr. Marston observes: "Although it may be, and probably is, true that the two diseases are in no respect antagonistic, there is in reality no evidence to indicate any causal or essential connexion between them. Enteric fever is *not* malarial fever; it occurs anywhere, and in places where ague is unknown; and when the two diseases co-exist, they do not prevail contemporaneously, nor are those stations which are notoriously malarious specially remarkable for the prevalence of enteric fever—in fact, the reverse appears to be the case. . . . Ague attacks men of all ages, Europeans and natives alike, while enteric fever does not; nor do any number of attacks of ague, except as these imply length of residence in India, confer an immunity from enteric fever. Moreover, enteric fever in no way responds to the influence of quinine, which is curative of ague." Some interesting tables are given showing the relative prevalence of enteric and other fevers during the first year of service of a number of corps, and the months in which the maximum prevalence of enteric and other fevers respectively occurs. With reference to the much controverted question of the production of enteric fever by the use of diseased meat, Dr. Marston gives a very interesting account of an outbreak of the disease in the 70th Regiment at Subathu, in which a strong *primâ facie* case was made out of its having been caused by the issue of mutton from diseased sheep; but on a careful inquiry into the health history of the corps, it was satisfactorily proved that seven cases and four deaths had occurred on the march to Subathu. "It is evident that the disease, therefore, cannot be said to have been originally contracted at Subathu, but was, in fact, carried there."

From a careful examination of the statistics of India Dr. Marston has arrived at the conclusion that the occurrence of enteric fever among the natives is very rare. "Opinions and beliefs [that it is a common disease] based upon *a priori* considerations exist in abundance, but corroborative facts, of which there should also be an abundance, are not forthcoming." It is certainly a strong confirmation of his opinion that there is no record of epidemics of it in the native gaols, where the true character of the disease could be verified by post-mortem examination.

The very important question whether, in the treatment of fever, the soldier is placed in the most advantageous position practicable for his recovery is, we regret to say, answered in the negative. "The treatment of all fevers, and of enteric fever especially, hinges upon thoroughly efficient and watchful nursing, suitable diet, regulation of temperature, and the use of drugs to meet the varying requirements of the case, administered with sufficient foresight and judgment to just forestall those requirements. I am afraid that none of the needs can be said to be as adequately and efficiently fulfilled as they might be." Some illustrations are given of the manner in which these important requirements are *not* carried out. The remedies suggested for this unsatisfactory condition of affairs are the formation of an Army Hospital Native Corps, supplemented by a certain proportion of the European element, for nursing purposes; a European cook to superintend the native cookery in the hospital; and a station hospital properly equipped and administered. We are glad to believe that the most important at least of these requirements will be provided under the new organisation of the Indian Medical Service, and that, by the substitution of the station hospital for the regimental system and the

formation of an efficient hospital corps, our soldiers will have the best chance that can be given them of recovery when prostrated by fever.

Dr. Marston calls attention to the "increased proclivity of the meat-eating and spirit-drinking races to enteric fever," and gives some details respecting the diet of the soldier in India, and the want of sufficient exercise to counteract its effects. He concludes that "it would be most undesirable, as well as wrong perhaps, to make him conform to the habits of the native, or deprive him of meat and alcohol; but that is no reason why some attempt in this direction should not be made at the advent of the hot season by curtailing his powers to eat and drink—especially drink—too much. Some men are tempted to drink beer or rum to secure sound sleep—difficult enough in a barrack room in the hot weather, when tormented with flies, mosquitoes, and possibly bugs. At such seasons it is very questionable whether the soldier's health would not be improved, too, by his remaining longer in bed in the morning, when sleep is more practicable, than by attending unreasonably early parades."

The paper is followed by carefully drawn up "remarks on the diagnosis and treatment of enteric fever," which well deserve the thoughtful study of the medical officer. We cannot enter into any detail on these remarks, but we may briefly notice one or two of Dr. Marston's conclusions. And, first, as to the occurrence of enteric fever in India, he remarks "whatever be the causes, there can be no doubt as to its nature. Enteric fever in India is, both in its clinical phenomena, when taken as a whole, and in its post-mortem appearances, perfectly identical with what is elsewhere known as enteric fever. . . . In short, it conforms to the description by which enteric fever is almost universally recognised." And again, he thus sums up his views on the subject. "The point which it is desired to emphasise is this—that one of the most common and fatal fevers in this country is enteric fever; that it chiefly attacks soldiers during their first years of Indian service; that it appears to prevail, though unequally, both in the plains and the hills, especially during the hot and rainy season; and that by its symptoms during life, and by its pathological appearances after death, it can be recognised as genuine enteric or intestinal fever; and that where the period of observation is sufficiently extended it can, in a large majority of cases, be diagnosed by the conformity of its symptoms as a whole to the descriptions given of enteric fever elsewhere."

The treatment of enteric fever is discussed under the various heads of accommodation, nursing, diet, reduction of temperature, regulation of the bowels, and the medicines most appropriate to the treatment of the various symptoms which arise in the course of the disease. A caution is given against the too early return to duty after an attack of enteric fever, and the value of a sea voyage or hill climate in restoring the patient to excellent health is pointed out.

We consider this paper to be a valuable addition to the history of disease as it occurs among our fellow-countrymen in India. Although there are many points still to be cleared up with reference to enteric fever in that country, Dr. Marston has done good service in bringing to the notice of the Army Medical officers in a condensed form the information which already exists on the subject, and has thus cleared the way for further inquiry into the controverted points connected with it. We trust that the example he has thus set may not have been thrown away, and that in the next annual report of the Surgeon-General we may have a continuation of these inquiries, conducted in the same spirit which has hitherto characterised his labours in this field.

THE BIRMINGHAM EYE HOSPITAL.

A SPECIAL meeting of the governors of this institution was held on the 15th inst., for the purpose of considering the report of the committee on the reconstruction of the hospital. The question at issue and the discussion to which it has given rise are of more than local interest.

Founded by the late Mr. Joseph Hodgson in 1823, and celebrated as the field of the classic labours of Mr. Richard Middlemore, the Birmingham Eye Hospital is only second to Moorfields, for the extent of its beneficent operations amongst similar institutions in the United Kingdom. Twenty years ago its patients (341 in, 3992 out) were so much more numerous than could be accommodated in the building then occupied, that the hospital was transferred to its present quarters, the old home of the Royal Hotel. Its 981 square yards of freehold ground were purchased on very advantageous terms, through the instrumentality of the senior surgeon, Mr. Edwin Chesshire; and it was found practicable and profitable to devote 400 yards of the site to the purposes of the hospital, and to let off the remainder, with goodwill and licences, as a Royal Hotel within reduced limits.

The reputation of the staff, the wise management of the committee, and the rapid growth of Birmingham and its surrounding district, concurred in producing the natural result. The patients steadily increased; so much so that they have more than trebled since 1860. Structural alterations have been made from time to time to meet the growing requirements; but since old drains will leak and brick walls are not elastic, the inevitable block has come at last. The medical officer of health has pronounced against the hospital building in its present state, and no one seems bold enough to defend it. On the necessity of a new hospital everyone seems agreed, not so as to its site and size. If the 981 square yards of freehold land belonging to the charity were devoted to the purposes of a new hospital, the architects would have an easy task; all present requirements could be fulfilled, with reserve space for years to come. But the hotel licence is so valuable, that it has been proposed to reconstruct the hospital on the 400 yards which it now covers, and gain additional cubic space by making the wards and corridors more lofty, and adding two new storeys. This plan has commended itself to Mr. Vose Solomon, whose position would have entitled his opinions to greater consideration from the governors if not opposed by his three colleagues, who are substantially of one mind. Mr. Chesshire is against building a hospital on a site not large enough for a good private residence. Only the other day he ordered the application of half-a-dozen leeches to one of his hospital patients, and erysipelas followed. Mr. H. Eales states that erysipelas is in the hospital at the present time, two patients suffering from it; while another of the surgeons (Mr. Lloyd Owen) urged "that the area on which it is proposed to reconstruct the hospital is totally insufficient for the needs of the institution."

Yet stronger were the statements of Mr. J. D. Goodman, a magistrate and one of the leading merchants of Birmingham, who filled the office of chairman of the Committee of the Eye Hospital during many of its most prosperous years. We gather from a report of his speech in the *Birmingham Daily Post* that "in the old building there was no accommodation for infectious cases. From time to time they had suffered from erysipelas, and even scarlet fever, in the institution, and it was most important that there should be some special ward for such cases. There was no such provision made in the new plans. In the old building there was no dead-house, and the practice had been to put the bodies of those who died in the operating room. Would they believe it, that there was no remedy for this in the proposed new building?" Such a state of things, attested on such authority, could not fail to produce a deep and serious impression on the governors, and the meeting adopted the prudent course of referring the whole matter back to the committee for reconsideration.

Birmingham should have an eye hospital worthy of its old repute, and equal to the wants of the community, according to the present high standard of sanitary and ophthalmological science. The recent census has proved how rapidly the Midland metropolis is growing, and its municipality and people are showing themselves alive to their honourable responsibilities by planning new streets and erecting colleges, libraries, art galleries, and museums, on a truly imperial scale. The public interest, the calls of humanity and science, and the honour of the medical profession, require that hospitals should not lag behind in supplying legitimate wants. After all, the difficulty of the Committee of the Birmingham Eye Hospital is an honourable one. It has been brought about by the success of their operations, and the repute of their staff. If they have now an unhealthy hospital they possess a splendid freehold site with valuable rights, and a goodly reserve at their bankers. To spend eight or ten thousand pounds in a reconstruction, which would scarcely be equal to the wants of the next ten years, could not be called economy, and it is to be hoped that, when they report to the governors, the committee will be prepared with recommendations worthy of the institution, and of the town on which it has conferred such signal benefits.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 24, 1881.

THE CASE OF THE LATE PRESIDENT GARFIELD.

IT is with great regret that we have to record the fatal termination of the injuries received on July 2nd by the President of the United States. As we have noted the progress of the distinguished patient week by week, we have been compelled to speak in the most guarded manner of the probable result of the injury, partly because of the scanty information in our possession, but still more from the extreme danger attending such injuries as he received. His iron constitution has borne up in a wonderful manner under illness that would long ago have proved fatal to one of less vital power, and this has afforded some ground for hope, but the extreme exhaustion and the evidence of blood-poisoning have induced us to express a very serious view of the probable termination of the case. Unfortunately, the event has justified such an opinion, and our readers will have been quite prepared for the news which reached this country on Tuesday last.

The facts revealed at the autopsy, so far as they have reached this country, put us in a position to trace the true course of the illness and its complications, and afford an explanation of some hitherto unsolved problems. It was on July 2nd that the injury was inflicted; the bullet entered the back to the right of the spine, between the tenth and eleventh ribs, and took a course downwards; it broke the eleventh rib, and then, being deflected to the left, passed through the body of the first lumbar vertebra, severely splintering it, and ultimately lodged behind the peritoneum, two inches and a half to the left of the spine, below the pancreas. There was severe shock, and signs of internal hæmorrhage, which threatened to be fatal, were observed; but the patient rallied, and the most marked local symptom was severe pain down the right leg into the foot, caused by pressure on or injury to one of the lumbar nerves passing to the anterior crural trunk. Traumatic fever was marked, but not excessive, and as there was no evidence of visceral lesion, hopes of recovery were entertained. The first grave indication was the persistence of pyrexia after the establishment of suppuration, and its increase in the second week. On July 23rd two rigors occurred, and it was deemed necessary to make a counter-opening in the loin, which gave exit to a considerable quantity of discharge; the pulse then fell, and the patient's strength and courage were so good as to inspire hope. But a disappointment occurred, for a few days later the temperature and pulse rose. As it was evident there was a bagging of pus along the wound, on August 8th a second counter-opening was made with temporary good effect; but now for the first time the bulletins contained references to the weakness of the pulse and general evidence of debility. To this was added extreme gastric irritability, so that on August 14th it was necessary to suspend entirely all attempts to give food by the mouth, and recourse was had to nutritive enemata; with this there was increasing exhaustion, which became so intense that for a time it was considered that the end was at hand. Again hope was excited, the nutritive enemata were retained and absorbed, the stomach regained some of its functional powers, and small quantities of fluid nourishment were taken by the mouth. Now a new and the most serious phase was added to the case in the form of an abscess in the parotid gland, which afforded undoubted evidence of blood-poisoning, the gravity of which was increased by the rapid and extreme emaciation, and the addition of a wandering delirium to the other signs of exhaustion. The parotid abscess was opened on August 24th. A few days later a second incision was made into a further collection of pus close by, and now the value of the President's robust constitution was shown by the gallant struggle he made against the progress of the blood-poisoning—a struggle against enormous odds, but in which his success was at times such as to inspire some feeble hope. Then came a period of daily fluctuation, and certainly no progress towards recovery, in which nutrient enemata were again resorted to; and on September 6th President GARFIELD was removed to Longbranch, a more healthy home on the shores of the Atlantic. The journey was fairly well borne; but now signs of hypostatic pulmonary congestion showed themselves, and the end was not far off. On September 17th a rigor occurred; on the 19th, two rigors; and late in the evening of that day, just as he was settling to rest for the night, the patient was seized with severe præcordial pain, quickly became unconscious and died, the constitution which had borne up against so much being at last overcome by hæmorrhage from a mesenteric artery. The autopsy revealed in addition to the line of the bullet mentioned above, and the ulceration into the mesenteric artery from its track, a burrowing of pus from the wound on the right of the spine behind the kidney, quite down to the groin; a second large abscess close to the gall-bladder, and bounded by the liver and colon; a small abscess in the left kidney; severe bronchitis and broncho-pneumonia—what is more generally known as hypostatic pneumonia, or congestion of the bases of both lungs; but no pulmonary abscesses, no cardiac thrombosis, and no signs of putrid embolism.

It is not difficult to read the case in the light of its entire history and the pathological changes found after death. For it has exhibited in a very typical manner the special features and perils of gunshot wounds which do not prove immediately fatal from their direct effects. The wound was devious and long, complicated with bruising of its edges and splintering of bones, and healing by primary intention was out of the question. As soon as suppuration was established the tortuous track with its swollen walls became blocked at places; thorough drainage was impossible, bagging of matter ensued, partly in the more superficial region, where it was readily liberated by counter-openings, but also deep behind the abdominal cavity; and thence ensued rigors and exhausting fever. But the suppurating wound in bruised tissues freely exposed to the air, with particles of dirt carried in by the bullet, soon became the seat of decomposition; and the putrid matter not finding

a free vent, absorption into the blood of septic material took place, and it was this that led the way to the fatal event. The parotid abscess was the first distinct indication of blood-poisoning, and we must express our astonishment that surgeons were found who refused to admit this interpretation of that symptom. But read in the light of the post-mortem examination it is most probable that the extreme gastric irritability and the rise of temperature which preceded the parotid affection were caused by the formation of the large abscess close to the liver. The telegraphic accounts are to the effect that this abscess was not in the liver, but only bounded by it. If this were its original seat, it must have formed in the peritoneal cavity—a most unusual thing. The far more likely solution is that quite on the surface of the liver a small abscess developed, which, after adhesions had formed around it, burst and greatly enlarged. The fatal hæmorrhage was not directly caused by the septicæmia, but by ulceration spreading from the wound; and it is more accurate to say that the President died with septicæmia than from septicæmia, although the blood-poisoning would quickly have proved fatal. The great loss of weight was also a marked feature of the case, and was due to the continued fever, the discharge, the septic intoxication, and the failure of the digestive functions.

The fact that perhaps deserves the most prominent notice in a consideration of this case is that the original injury was not one necessarily fatal; death resulted solely from "accidents" in its course; and it may be taken as so far an example of a failure of surgery. In its path the bullet did not wound any vital part, and it became safely encysted; and had the sinuous wound it made only closed up, all would have been well. Why did not the wound thus heal up? The explanation is sufficiently obvious: its walls were bruised and so injured that primary union was impossible; the bruised and broken parts became sloughs and sequestra, and they and the adventitious matters carried into the wound had to be cast off by suppuration. But the path of the ball was very tortuous and narrow, and this condition was exaggerated by the swelling ensuing upon the injury and suppuration, and so the pus formed in the deeper parts of the wound, finding no ready exit, accumulated and burrowed, some being liberated by the surgeon's knife, but one collection spreading down into the iliac fossa. Such a wound only too readily became putrid, and the retention of pent-up putrid matter almost ensured absorption of septic poison and death. The necessary treatment then of the injury was first of all efficient drainage of the whole length of the wound, and prevention of decomposition of the discharge and the separating sloughs. It will be asked, could this have been done? Although the indications were obvious, we do not see how they could have been carried out with the means at present known. There was, first, the difficulty of ascertaining the exact course of the ball, and, as the event shows, even Bell's electric probe would only have misled the surgeons. Had its path been as they at first imagined, through the liver and peritoneal cavity, any enlargement of the wound in that viscus would have been fraught with great danger, nor would it have secured the end in view; while a thorough disinfection of the wound would have been an impossibility, and the attempt a very dangerous procedure. But had the surgeons known the exact course of the bullet, could they have succeeded in such an endeavour? To have secured free drainage would at any rate have exposed the patient to the risk of wounding a large vessel, or of opening the peritoneal cavity, with possible injury to the spinal cord and nerves. But it may be regarded as an open question how far successful an attempt to render the wound aseptic might have been; had it proved possible, the mere bagging of matter might have been subsequently dealt with. It would be unjust, however, to impute blame to the surgeons in charge; and it is a matter of congratulation that they were not led away by any vulgar desire to extract the bullet. The bullet had done no harm since it once reached its resting-place near the pancreas; and its extraction *per se* would not have influenced at all the subsequent course of the case.

Blood-poisoning is such a wide term that we cannot dismiss the case with that diagnosis alone. In distinguishing its three forms—septic intoxication, septic infection, and embolic pyæmia—we may exclude the last altogether, as the autopsy did not show any coarse embolic abscesses, although the repeated rigors just before death gave countenance to the view that they were being formed. In the pyrexia and rapid wasting and exhaustion we probably see the effects of the continuous absorption of a septic poison having no power of multiplication within the body—septic intoxication. But certain it is that the abscesses in the liver, kidney, and parotid offered abundant evidence of septic infection, or the absorption of a poison having the power of multiplying in the body, and associated with the presence of micrococci. Such abscesses are common in the kidney, where they seem to commence in masses of micrococci plugging the glomeruli, and their true nature is presumed to be similar in other parts. Had life been prolonged it is very probable that such abscesses would have formed in the bases of the lungs, the vitality of which was lowered by the hypostatic congestion. Septic parotid abscesses are not very rare, although the Pyæmia Committee of the Pathological Society met with only one instance in their investigations. In this connexion we are able to give a definite value to the splendid constitution of the patient, for while the poisonous micrococci are capable of multiplying indefinitely in the body, living tissues have the power of destroying them, and the President showed his wonderful endurance and vitality in that these germs were destroyed, and that he withstood for so long the effects of the dread disease which had seized him. This form of blood-poisoning, when chronic, may run its course with but little pyrexia, although not with a normal temperature all through the day. There have been many expressions of surprise at the daily records of the temperature being so low and so inconsistent with the state of the pulse; but it must be remembered that the bulletins merely gave the temperature at certain hours, and we presume that the intermediate temperatures were often pyrexial. As to the minor details of the treatment we can say nothing; we are not acquainted with them, nor with the many finer and varying shades of the case, but the fact that life had been so long preserved is the best of all evidence in favour of the surgeons.

ATTENTION has recently been directed afresh to the management of hospitals. It happens that just now the public mind is more particularly concerned about out-door charitable medical relief, not only in the metropolis, but also at Wolverhampton. A great deal has recently been published about a "dead-lock" in the out-patient department of the Wolverhampton General Hospital, and last week the members of a firm wrote to *The Times*, complaining that a lad in their employ had had to wait seven hours at Guy's Hospital before he could be seen by the surgeon and attended to by the dresser. These perennial outcries create some excitement for the time, schemes of reform are regularly propounded, recommendations of various kinds are made, and then—things are allowed to remain just as they were, until an overworked house-surgeon or dresser has the misfortune to err in diagnosis or in judgment, or till someone, with an itching for writing, but without any right to hospital relief, announces in a public newspaper that he has been unduly detained while getting at a charity medical advice that he was perhaps fully able to pay for.

The quasi-periodicity of the complaints against hospital management is of itself almost sufficient proof that there is something wrong. The complaints against the medical as well as the lay administration of hospitals are, however, often exaggerated, and sometimes fictitious. The common accusation that a large percentage of persons get medical relief from hospitals for nothing who are well able to pay is true only in a qualified sense. The amount of actual abuse of the charity is over-estimated. Nevertheless, there can be no question that the system of hospital relief is unsatisfactory in parts, and needs to be amended. The out-patient departments especially require prompt and radical correction. Stated generally, it must at once be conceded that scores of thousands of persons annually obtain medical relief as out-patients at hospitals who are not proper objects of charity. They can afford to pay *something* for the advice and services they receive. Most of them may, for instance, be able to pay the ordinary fee of a family medical attendant of persons of their station, but be unable to raise in one amount a single guinea. If hospitals are to be limited to the relief of the "indigent sick," very slight acquaintance with hospital practice will suffice to show that a very large proportion of the persons who comprise the out-patients of the metropolitan hospitals are not fit subjects.

But whatever may be the theoretical constitution of hospitals, it is a notorious fact that hospital relief is confessedly no longer restricted to persons altogether destitute. Indeed, the majority of metropolitan out-patients are comparatively well-to-do. The actual pauper is otherwise provided for, and does not, as a rule, seek advice at ordinary hospitals. Though the majority of the persons who do now obtain relief at the out-patient departments of hospitals are, as we have just said, able to pay the ordinary fee of a general practitioner, they are wholly unable to pay the customary fee of the physician or surgeon whose services they obtain at hospitals. No reform will be either satisfactory or just that does not recognise this. It would be often positively inhuman to deny to such persons the skilled advice of the physicians and surgeons attached to hospitals, and it therefore becomes a matter for the consideration of the lay and medical authorities of hospitals whether some provision shall not be made whereby such persons shall be free to obtain this advice, at a reasonable cost, without being pauperised as at present. It should not be difficult to prepare a scheme of payment that would be acceptable to the patients themselves, and would in no way damage the legitimate interests of medical practitioners. For the success of such a scheme it is necessary, first, that there should be no clashing of interests between general practitioners and the physicians and surgeons attached to hospitals, and, second, that the members of the medical and surgical staff should be paid a certain rate of remuneration for their services to *paying* patients. Though under no moral compulsion, the members of the medical profession are always willing to *give* their services in the cause of charity, but they would not hold themselves so cheap as to give their services also to those who *pay*.

As regards the various sections of the profession, hospitals should, perhaps, be purely consultative for those who cannot pay a full fee; while, as regards all other patients, closer supervision to eliminate unfit cases is urgently called for. The time is come for the co-operation of the authorities of all the hospitals in carrying out an effectual reform. Isolated action is useless. Failing a Royal Commission, a Conference of the lay and medical authorities of hospitals would probably expedite the adoption of a scheme that could give the *quietus* to most of the complaints against hospital abuse. Meanwhile each hospital may protect itself by the observance of some simple rules—namely, first, to admit at once all accidents and urgent cases; and, second, only to attend to other cases when provided with a subscriber's letter or a medical man's card, or after fitness has been determined by the investigations of a competent person.

THE resolution unanimously adopted in the Sub-section for Diseases of the Throat of the International Medical Congress, whereby separate meetings of a similar body were practically abandoned, calls attention again to the unsatisfactory state in which this specialty still exists in our own country. We do not refer to the skill or knowledge of the few among us who devote themselves to it, but to its general neglect by the large body of the profession. Its study is not made compulsory, nor is examination in this branch of medical knowledge and practice conducted by any of the licensing bodies or universities. It is hardly an exaggeration to say that so far as the general hospitals and medical schools of this country are concerned, laryngology is almost entirely unrecognised. As proof of this, we may point to the facts that in some of the largest hospitals and medical schools there is no proper means of studying or teaching diseases of the larynx; while in others where there are "throat departments," special knowledge is not considered an essential condition for appointment to their conduct and control, but the junior members of the staff are in turn placed in charge of the department, and by the regular promotion removed from it when their experience has made them valuable practitioners, and capable of teaching and advancing this department of medicine. The results of this are obvious. With exceptions so rare as to prove the rule, no important scientific work has been done in laryngology in any of our general hospitals; practitioners are unacquainted with the means of diagnosing diseases of the

larynx, and, even when a diagnosis has been made by a "specialist," are incompetent to carry out the required treatment, and their patients are thus completely handed over to specialists. In all this we are far behind other countries; for instance, in Germany every student at his clinical examination is liable to be asked to examine a patient's larynx, and such knowledge and skill are looked upon as essential to graduation—as not less so than a knowledge of the use of a stethoscope or urinometer.

But it may be asked whether there is or ought to be a separate department of laryngology. It must be confessed that at any rate the laity have answered this question in the affirmative. It is certain that the larynx and naso-pharynx are the frequent seats of diseases varying in degree from trivial to the gravest possible; it is also certain that the diagnosis of these diseases can only be positively made by special means, the laryngoscope; while their successful treatment demands special methods and special skill. Although, then, there is abundant reason in all this why these diseases should be carefully studied, the necessity becomes more urgent when it is remembered that examination of the larynx is often capable of affording the very greatest help in the diagnosis and prevention of other affections. Thus laryngeal anæmia may precede for months the development of tubercle, and if recognised in time lead to treatment to obviate that result. Thoracic aneurisms and other mediastinal tumours may be diagnosed by aid of the laryngoscope before the ordinary physical examination of the chest affords certain indication of their presence. Tertiary syphilis may also have its sole seat in the larynx, and its identification there may be the only clue to the required treatment. One of the latest advances of this specialty has been the recognition of the existence of adenoid vegetations in the naso-pharyngeal space, and their serious effects upon articulation and the development of the whole frame. It has been demonstrated that this is the explanation of many cases of delicacy during childhood associated with a "thick" intonation. And its local curative treatment has been attended with excellent results upon the general health. Laryngeal neuroses are also as useful in the diagnosis of central nerve lesions as are the changes to be seen with the ophthalmoscope in the fundus oculi. None of these conditions are of merely local importance, but they all combine to show that a knowledge of the mode of examining and treating this region has enlarged the physician's power of diagnosis, prognosis, and preventive therapeutics. To ignore such aid is evidence of want of appreciation of the difficulty and responsibility of the medical calling, and tends to perpetuate such gross errors in practice—of everyday occurrence—as the treating a laryngitis with astringent or caustic applications to the pharynx.

In using the term "specialty," we have employed it for convenience only, to indicate that department of knowledge which is acquired or practised with the aid of reflected light thrown into the pharynx, larynx, and nose—the proper limits of laryngology so-called,—and obviously not because the treatment of these diseases should remain in the hands of "specialists." We have called attention rather to the neglect by the general body of the profession of useful knowledge which, now the possession of a few only, ought to be enjoyed by all in their degree.

The improvements required are, first and foremost, better provision for teaching students. As much pains and care should be taken in teaching the pathology, diagnosis, and treatment of the diseases of the larynx as of the eye or ear. In these latter cases appointment to the charge of the special clinical department of a hospital is never a mere matter of rotation, neither ought it to be in the former, but special fitness and experience should be imperatively required. Following upon this must come compulsory learning of laryngology as tested by practical examination. Our students ought to leave the hospitals as well able to diagnose a chronic laryngitis as disease of the mitral valve, stone in the bladder, or glaucoma; and although the more difficult operations in the throat will probably always remain in the hands of those specially skilled in their performance, as is the case in other regions and diseases, every practitioner ought to be able to make applications to the larynx as readily as he can wash out a bladder or syringe an ear. It may be urged that the time at the disposal of the student is but short, and is already too crowded to permit of adding another study. The plea is in part honest and true: medical science has grown faster than the mental capacity of medical students, and the statutory four years no longer suffice for mastering thoroughly the common knowledge of the schools. But if this be so, it affords no justification for the exclusion of a *necessary* branch of study; the time must be found by lengthening the curriculum, and means must be taken to fit the British practitioner for the position he assumes.

"AN inquiring mind" is generally regarded as an unqualified advantage, but when injudiciously developed, this possession may prove a source of danger to the medical student. There are so many outlying provinces of research around the legitimate domain of practical medicine, and some of them are, as seen at a distance, so attractive, that it is necessary to take especial pains to put the student on his guard against their allurements. Success in the plain course marked out for the curriculum depends mainly on the concentration of energy. No young man has a right to assume that he can do *more* than master the essential details of his work in the time allotted for the purposes of study. It is a great error to "cram" with a view to passing examinations, but it is not less a fault to form a habit of desultory reading, as though for amusement. It is not difficult for those who have had some experience in professional life to recall to memory painful and most disappointing instances of failure from that dispersion of brain-power which too often happens when the mind is allowed to roam at caprice among the departments of science, instead of being restrained and trained for the study of a limited number of necessary subjects. When a youth comes to the investigation of Nature fresh from the learning of languages and the pursuits of an ordinary education, he is exceedingly likely, if he be of "an inquiring mind," to experience a feeling of liberty which may easily pass into licence. There is something dazzling in the first blush of natural science, and, in the absence of a strong and clear judgment to guide the beginner, he will readily become bewildered, and either flit from point to point, picking up a smattering of many parts of knowledge without learning much of any, or he may be carried away in his enthusiasm into one of

the by-paths of inquiry, and in the end find himself outside the legitimate province of medicine and lost in a wilderness of fallacy and mistake.

Conspicuous among the many who are thus lost, and whose prospect of professional success is clouded over at the threshold of their careers, are the students with inquiring minds, who are seduced into the folly of devoting their "spare time"—as though a genuine brain-worker could have any spare time!—to the investigation of "mesmerism," "clairvoyance," "spiritualism," or any one of the "isms" and "ologies" which lie around the province of medicine as so many man-traps. We must not forget to mention the "pathies" among the pitfalls that beset and may easily ensnare the unwary. At the risk of being thought "old-fashioned," we will not hesitate to affirm that it is waste of time, and worse, to squander strength and thought on these subjects. A man is no richer, and he may easily be the poorer, in brain-power for having allowed his mind to wander in the forbidden paths of science,—and the paths leading to the "isms," "ologies," and "pathies" in connexion with medicine are, or ought to be, forbidden. It is time enough to indulge in the quest of folly when the day's work has been resolutely prosecuted to an extent which may reasonably be held to constitute a promise of its completeness. If hours must be wasted, let it be when the shades of evening are beginning to fall. He who would strive worthily, doing good work, and deserving success, must devote the whole of his attention and the total of his mental forces to the business in hand. He must be practical, earnest, and dauntless in his pursuit of science, and if these are the characteristics of his enterprise he will neither find time nor have any inclination to deviate from the straight path marked out for him.

There are, however, other equally cogent reasons why the student should not be a desultory worker or a loose thinker. It seldom happens, under the modern system of preliminary education, that the mind of a young man entering upon the study of medicine is so trained and cultivated as to be able to engage in desultory work, even by way of pastime, without suffering a loss of the mental power of focusing. Everything depends on the exercise of this power in the study of difficult and deep subjects. The mind must be able to fix its attention and, as it were, adjust its converging forces, so that they shall meet and constitute a strong prehensile faculty or the acquisition of knowledge and the full apprehension of that which is acquired. Clearness of thought in learning is essential to precision in remembering what is learned. If we do not know our possessions and put them away in an orderly and connected manner, we cannot reasonably expect to be able to find them instantly when they are wanted for use. Many young men know a great deal more than they can command for practical purposes; and some think they have a large stock of information who, as a matter of fact, know little or nothing. We take in a great deal unconsciously, and much of what we suppose ourselves to have appropriated has not been taken into the mind at all. It is, therefore, indispensable that the student should cultivate a habit of perpetually "taking stock" of his knowledge, or, so to say, taking each item out and looking at it, and replacing it with new connecting links and in better order. In this process he learns to know what he knows, and, discovering the weak and defective points in his knowledge, is able to strengthen and perfect the whole. The faculty by which this important task is to be accomplished is one which is exceedingly likely to be impaired by the practice of purposeless or unsystematic inquiry.

Just as lounging spoils the gait of the pedestrian, and listless paddling destroys the form of the rowing man, so a mental habit of expectancy towards the super- or extra-natural—as we understand Nature for practical purposes—and a readiness to accept as facts what are mere fancies, confounding the subjective with the objective, tend to impair that instinctive faculty of judgment which is essential to, and should ever underlie, the desire for knowledge. A man will never *know* anything thoroughly—in the sense of making it part of himself by the organisation of ideas—if he allows his mind to fall into the baneful habit of revelling in novelty, and finding an intellectual pleasure in being surprised. The itching ears of the news-lover have their counterpart in the keenly inquisitive mind of the desultory and yet impulsively eager truth-seeker. The great want of the day—and especially in science—is not so much more information as better knowledge. In any case, this is what the student should make his object. He should never rest content with the way in which he holds his knowledge. If, with the aim of making what he knows his own, he sets himself to work up to the standard of legitimate requirements, he will have no time to spare in his pupilage, and no mind-strength for which he has not an immediate demand. We cannot too earnestly warn the student to keep close to the path of practical medicine, and to avoid as a peril the besetting desire to run off in quest of novelty. Those who have surrendered their minds to the pursuit of a will-o'-the-wisp in the shape of wonders and mysteries have found themselves in a dismal swamp from which return was impossible. There are at this moment hundreds of men with good and capable minds who have made shipwreck of common-sense, and are doing dire mischief to themselves, the profession, and the community by indulging the mischievous propensities of an inquiring mind. From this future—a future of disappointment and failure—we would save the student. It is the "inquiring student's" danger. The enterprise that commands success is not only earnest, but solid, sensible, and self-sustained.

THE inhabitants of that portion of the metropolis which is supplied with water by the Grand Junction Waterworks Company will not readily forget the discomfort to which they were subjected by the failure of the water-supply for two or three days during the month of July last. The causes of this failure asserted at the time, with the exception of such as related to the bursting of a main at Shepherd's-bush—namely, the excessive use, or misuse, of water, during a period of unusual drought, for watering the roads and watering gardens—seemed to be matters which a little foresight ought to have so readily prevented that the Water Company was freely blamed for the disaster. It is gratifying to find, however, from the report of Lieut.-Colonel BOLTON, R.E., the water examiner, who was instructed to make inquiry into the source of the failure of July, that no lack of foresight of the Water Company and its officers was concerned in the failure.

Colonel BOLTON'S report of his inquiry, which has just been made public, is an instructive and valuable illustration

of the responsibilities undertaken by a metropolitan water company in carrying out the requirements of its district. It shows, moreover, that the Grand Junction Company, before the failure of July last, had become fully aware that the increasing demands upon their water-supplies were absorbing too closely the margin of supply they possessed for extra demands and casualties. In view of this danger the Company early in 1880 determined upon taking such measures to meet a probable near approaching deficiency in their supply and in its mode of distribution as would obviate danger of failure; and had these measures been carried out as originally designed, the failure of the present year would not have occurred. But it so happened that, while these measures were in inception, the preliminary negotiations were entered upon for the proposed purchase of the Company's works by the Government; and as a first step in these negotiations it was required from the Company not to enter upon any new works. This engagement put an end to the carrying out of the works which would have obviated this year's failure of supply in the Grand Junction's district, and was in fact the remote cause of the disaster of July. The first result of the proposition that the Government should purchase the properties of the Metropolitan Water Companies, and place the water-supply of the metropolis under one governing body—a proposition with which the metropolitan population as a whole has been long cock-a-hoop—has been to produce a temporary water-famine in one of the Water Companies' districts—an incidental and accidental result truly, but not the less uncomfortable to the inhabitants of the afflicted district. The Government purchase being now, however, indefinitely withdrawn, the Grand Junction Water Company is proceeding to complete the works it contemplated in 1880; and its customers, according to Colonel BOLTON, may now feel some assurance that the default of July, 1881, will not be repeated.

Apart from the light which Colonel BOLTON'S report throws upon the causes of the failure of the water-supply in the Grand Junction Company's district in July last, it gives some instructive and interesting information upon the difficulties which a water company has to contend with in maintaining the regularity and sufficiency of supply in the varying circumstances which are met with in a district with the topographical features of London. The failure of July last was not felt on the lower levels, but was chiefly experienced in a portion of the high levels, and here again not so much in the lower service of houses as in the high service. A recent and growing change in the construction of high-class and large business houses comes in for special comment by Colonel BOLTON. The transference of the kitchens from the basement of an establishment to the highest storey involves difficulties of water-supply, perhaps not hitherto sufficiently considered by architects, particularly when surrounding supplies of water are fixed in the basement. Every additional foot of altitude in placing the supply cisterns of a house involves increasing difficulties of efficient supply and increasing liabilities of failure, particularly, as is often the case, as the means are retained of withdrawing water at the lower levels. This and other interesting questions of detail are touched upon in Colonel BOLTON'S report. In one important matter, however, he leaves his readers in a state of bewilderment. He tells us that the Grand Junction Company are authorised to draw 20,000,000 gallons daily from the Thames. But elsewhere in his report he tells us that when the arrangements now being made by the company are completed they will be in a condition to take *over* 20,000,000 gallons from the river, and that the 20,000,000 gallons they are authorised to take is practically now wanted. He does not, however, enlighten us as to the manner in which the Company is to be authorised to draw water from the river in excess of the quantity it may now take. The oversight may be of the same kind as that which has induced Colonel BOLTON to date the letter to the Secretary of the Local Government Board accompanying his report on the 4th August, while he states in his letter that the report was made in consequence of instructions made on the "21st instant."

Annotations.

"Ne quid nimis."

ABUSE OF PROVIDENT DISPENSARIES IN MANCHESTER.

OUR columns have occasionally been the medium of statements to the effect that the Provident Dispensary scheme of Manchester was being worked in a way that was never intended by its promoters, and is very injurious to medical practice. It is easy to make such statements. It is much better to put them on some well-authenticated basis. We are glad to see that the Manchester Medico-Ethical Association Provident Dispensary Sub-committee has taken the matter up, and is making an effort to get at the real facts. It has issued a circular to the members of the profession embodying the following questions: "1. As to the class of patients admitted. (*a*) Are the members strictly confined to those whose incomes are not more than 30*s.* per week? (*b*) Is any inquiry made into the means of the applicants, and by whom? (*c*) If persons whose incomes are above 30*s.* are admitted, what means are taken to eliminate them? (*d*) If clubs are received, are members of such clubs within the above-named limit? 2. As to the remuneration. (*a*) Can you supply the Sub-committee with evidence as to the proportion of visits and consultations at the dispensary or at the medical officer's surgery, to the number of paying members, distinguishing the visits from the consultations? (*b*) What is the average number of daily visits required, and what proportion do they bear to the total number paying weekly fees? 3. Is there any pressure or inducement used to cause applicants to enter under one medical officer in preference to another, or to induce members to transfer themselves from one medical officer to another? 4. What has been the influence on the practice of the medical men in the neighbourhood of a newly established dispensary? The Sub-committee will be glad to receive any other information in reference to the working of the scheme that it may be in your power to communicate." We hope that every member of the profession will do his best to supply any information he can give, not necessarily confining himself to the bare questions given above. The importance of the result at the present moment is very great.

LUNACY IN SCOTLAND.

SUMMARISING the statistics of lunacy in Scotland for the period 1858–81, the Scotch Commissioners, in their twenty-third report, show an increase of 72 per cent. in the number of lunatics under the jurisdiction of the Board, while the estimated increase of the population has been only 22 per cent.; but the Commissioners add, "We have

frequently pointed out that the difference in these rates of increase *does not necessarily indicate an increasing amount of mental disease*, and that it is probably due in a large measure to what is *only an increasing readiness to place persons as lunatics in establishments.*" The italics are ours, but the recognition of this, as we believe, the true explanation of the alleged increase of lunacy, is sufficiently emphasised in the report, and it is gratifying to find the facts more clearly perceived and better understood on the other side the Tweed than they are on this side and among ourselves. A notable feature in the asylum system of Scotland is the almost total disappearance of the class of private asylums which used to take paupers and charge very low rates. Another feature is the rapid development of liberty and the almost universal adoption of the "open-door system." The Commissioners cordially approve the progress of this method, and note how it has diminished the tendency to escape by removing an incentive or provocation. They say, "It is indeed a thing of common experience, that the mere feeling of being locked in is sufficient to awaken a desire to get out. ..... The desire to escape dies away when it ceases to be suggested, by forcing upon their attention the means of preventing it." The system does not—as superintendents of English asylums suppose it must—necessitate an increase of expense by creating a demand for additional attendants. The general effect has been to make the attendants more intelligently watchful of patients, and indirectly to bring about that most desirable of results—a better knowledge of their individual states; but it has not added to the cost. We heartily commend the study of this report to practitioners in lunacy generally and the keepers of asylums, whether public or private. It is full of suggestive matter. The remarks of Deputy Commissioner Lawson on the treatment and custody of the insane in private dwellings are especially interesting.

SERPENT-POISON.

M. LACERDA, continuing his investigations into the properties of the poison of serpents, has ascertained that the venom of the Hachesis rhambeata possesses the power of digesting albuminous substances, and of emulsifying fats. In these properties it resembles pancreatic juice, but it appears to have no action upon starch. A piece of beef having been cut into small pieces and placed in a capsule with distilled water, a few drops of the poison, diluted with water, were added. Immediately the muscular tissue became pale, and its fibres a little separated. On being kept for four hours at the temperature of 30° C., and then, for twelve hours more, at the ordinary temperature, the muscle was softened and broken up into a greenish liquid of a peculiar odour. Coagulated egg-albumen, treated in the same manner, became changed much more rapidly; it was broken up in three hours, and completely dissolved in twenty-four hours. A few drops of oil were rapidly emulsified on being shaken up with the diluted poison. These facts seem to throw some light on the mode of action of the poison on the organism. The local effects of its inoculation may, perhaps, be regarded as, in effect, a digestion of the living tissues. The general effects are also explained by its rapid action on albuminous tissues. M. Lacerda speculates that its value to the reptile is not only for attack or defence; it may also assist the digestion of the victim into the tissues of which it has been inoculated. In communicating these observations by M. Lacerda to the Société de Biologie, M. Couty made some observations on the general conclusions from his own researches. The venom of serpents is not a simple poison, but a pathogenic agent capable of selecting certain organs and tissues. The hæmorrhages which result from its intravenous injection in the monkey or the dog are always situated in the lungs; in the endocardium of the left side of the heart, to the exclusion of the right; in the meninges, to the exclusion of the nerve tissues; and less commonly in the stomach, intestines, and kidneys. The local inflammation which it produces when inoculated beneath the skin is intense, and occurs almost immediately in the lungs, and is considerable, but produced less rapidly, in the cellular tissue or serous membranes, much more slowly in the muscles, and it is absent or almost absent in the stomach and intestines. The varied susceptibility of different animals is strikingly shown by the circumstance that the monkey, weight for weight, is about a thousand times more susceptible than the frog. The venom of bothraps is not influenced by repeated boiling, and filtration only lessens slightly its power. Many of these poisons, after keeping, contain various bacteria, which can be cultivated, and the culture-liquid, or the fluids from an inflammation due to the poison, cause symptoms different from those of the poison itself, and comparable to simple septicæmia. The venom is thus not an organised virus. A comparative study shows, however, that there are considerable differences between different venoms. That of the toad, injected beneath the skin of the dog, causes repeated vomiting and convulsions, but produces also, if the animal does not die, intense local inflammation. The real nature of these agents, and the mechanism by which local inflammation is excited by them, are still unknown.

LONDON IN AUTUMN.

IT is one of the inconveniences of our artificial life that we are ruled by fashion, not only in our habits and customs, but in the formation and maintenance of those prejudices which underlie our likes and dislikes. For example, it is the fashion to leave London in the later summer months, and, as far as possible, to avoid it in the autumn months of September and October. Setting aside the considerations which induce the lovers of sport to fly from the metropolis at this season, there is the influence of example which determines the action of the majority. Doubtless the multitude of those who set out on their travels about the beginning of August, and remain away as long as possible—assuming an apologetic tone when they are compelled to return before the end of September, and professing, perhaps cherishing, a hope of "going away again,"—are simply devotees of fashion. Nevertheless, in spite of all the arguments in favour of the practice of leaving London in autumn, it is an unreasonable procedure. It is precisely at this season that the metropolis and suburbs are most enjoyable. The Parks are in their finest condition, the atmosphere is clear, and the outlying districts are at their best in the sense of being most like the country; and for those who will accept the plain evidence of their eyes the scenery around London, accessible without very long drives, is exceedingly beautiful. If one-half the weakly folk who now, from habit, or in obedience to social custom, undertake fatiguing journeys, and expose themselves to needless annoyances and dangers in the search for health, would remain in town and make the largest possible use of the good air and pleasant changes available by short excursions around the metropolis, they would be spared many inconveniences, the expenditure of much needed strength, and saved many risks, while the health they seek abroad might be more readily and easily found at home. Those who *will* go away, without being compelled to do so, should at least choose that season for their departure when London is really an unpleasant and dangerous place of residence. In the month of November, and often in December, the town is gloomy, the atmosphere laden with pestilential fogs and vapours, the Parks are wildernesses, and the round-lying districts wretched. When the capital with its environs is at its worst is the time to avoid it; not now when it is at its best, neither too hot nor too cold, and the country about is clothed with verdure and in every way

beautiful. We throw out these hints for the benefit of invalids, but they are not unworthy the heed of the healthy.

LEARNING TO SWIM.

IT is strange that, living on an island as we do, we are not more intent on learning to swim. Mr. J. G. Elliott, the hon. secretary of the London Swimming Club, writing to a contemporary, complains of the lack of earnestness in this sport. He contrasts the apathy of bathers with the enthusiasm of cricketers. The difference is very noticeable. It would be well if anything could be done or said to stir some stronger feeling of interest in the subject. Swimming ought, undoubtedly, to be taught in schools as part of a course of physical education. It is deplorable that so many lives as are now lost annually should be sacrificed because no pains are bestowed on this important form of self-preservation. We have repeatedly urged that children should be taught to swim, at least as well as would suffice for the saving of their own lives or the rescue of a drowning person, with their clothes on. We are glad to know that this practice is being adopted, and with the best results; that it is absolutely essential no one who thinks the matter over seriously can doubt. The conditions are wholly different when a bather disrobes in a leisurely way and walks or dives into the water, and when he suddenly falls into the water from a boat. If a power of swimming is to be of any real value to him, the boy must be trained to recover self-possession and strike out instantly when he finds himself in the water, no matter how he came there. It is in this way swimming must be taught and learnt, if it is to be of real service in the protection of life.

MORTALITY IN INDIAN TEA PLANTATIONS.

IT is reported that an "Assam Labour Emigration Bill" has been introduced into the Indian Legislative Council, which, it is hoped, will effect a great improvement in the existing law by cheapening the cost of importing and recruiting labour to Assam, thus, it is believed, conferring a decided benefit on the tea planters in that province. While it is impossible to doubt the general advantage to India and the home country that would arise from the increase of tea planting in India, it is to be earnestly hoped that in this proposed legislation the welfare of the imported labourers will not be lost sight of in the desire to benefit the tea planter and to encourage trade. It is desirable not to forget the statistics bearing on this subject contained in the correspondence having its origin in Mr. O'Donnell's criticisms upon our Indian administration. It was asserted that scarcely two out of three indentured coolies in Assam who work in the tea gardens survive their three years' term under present conditions. In reply to this serious statement attention was called to the fact that a clause in the Emigration Law, which controls this importation of labour, provides that a tea garden in which the rate of mortality among the labourers during any year exceeds 70 per 1000 shall be closed to imported labour. This clause is appealed to as evidence that legislation takes "the greatest care of the labourers." It is hardly satisfactory to know that the rate of mortality among these imported coolies must amount to more than three times the average rate among the English population before this clause affords them protection against the continuance of such terrible fatality. It may confidently be hoped that but few tea gardens are closed under the operation of this clause; but facts brought to light in the recent correspondence abundantly prove the unsatisfactory sanitary condition of these tea gardens, and the great loss of life which is involved in the growth of Indian tea, much of which must surely be avoidable. Mr. Ernest Tye, the Secretary of the Indian Tea Districts Association, admitted that the rate of mortality last year among 10,500 labourers employed by the Assam Company, one of the largest employers of labour in the province, was equal to 45·4 per 1000. We sincerely hope that such a death-rate is deemed unsatisfactory by the tea planters, and we yet have to be convinced that ordinary sanitary precautions would not reduce such a death-rate by one-half. At any rate, it is well that those interested in the growth of Indian tea should earnestly seek to reduce its cost in human life.

URINARY ANALYSIS.

A NEW method for the quantitative analysis of the extractive matters of urine has been worked out by MM. Chavane and Richet, who claim for it the advantage of much greater simplicity than that of the methods at present in use. A solution of biniodide of mercury and iodide of potassium, to which potash has been added, is blackened by urine, and oxide of mercury is precipitated. The reaction takes place even in the cold, but is facilitated by heat. Neither the urea, chlorides, phosphates, nor sulphates are precipitated, but uric acid causes a white deposit from which heat causes oxide of mercury to separate. Alkaloids, formiates, and acetates have no influence. If the reaction of the mixture is acid the precipitate does not form, a soluble salt of mercury being produced, but the alkalinity of the test solution is usually sufficient to ensure the reaction. Salts of ammonia, moreover, mask the reaction by dissolving the oxide of mercury. Chloral, aldehyde, sugar, and all readily oxidisable substances also precipitate the oxide of mercury. Normal urine contains substances which have the same action—viz., nitrogenous substances soluble in ether and in alcohol. Hence this method gives a simple means of ascertaining the amount of colouring matter, extractive matter, and nitrogenous substances other than urea. The exact mode of proceeding is as follows:—The composition of the solution is 10 grammes of binoxide of mercury, 20 of iodide of potassium, 50 of caustic potash, and 930 of distilled water. One burette is filled with the solution, another with urine. Fifteen drops of each are allowed to fall into a porcelain capsule, and it is heated and urine added until the mercury is proved to be precipitated by the absence of the reaction given by an alkaline solution of tin, with a small quantity taken up by a capillary tube. A litre of normal urine precipitates about five grammes of mercury.

A SANITARY AND SCIENTIFIC EXHIBITION IN BRIGHTON.

IT has been decided to hold a Domestic, Sanitary, Scientific, and Artistic Exhibition at Brighton, in December next, and an influential committee has been appointed to conduct all the necessary arrangements. From the speeches of the promoters of the scheme we gather that the Exhibition is to be of a thoroughly practical, educational character, designed to meet one of the greatest wants of the times. The domestic part of the Exhibition is to consist of articles of diet, methods of cooking, and utensils which combine economy with cleanliness and thorough nutritive efficiency. The sanitary appliances will be of the usual kind, but limited to those in use by individuals or in private houses. The science department will include home medical appliances, and an especial feature is to be a comparison of the different electric lights now before the public. Art is to be represented by specimens of painting on china and porcelain, &c. This is not a complete list; in fact the committee desire to bring together all objects whose use tends to make homes healthy, comfortable, and pretty. Lectures are to be given by eminent authorities on various hygienic topics, and it is hoped that demonstrations will form a special feature of the Exhibition. There is no need to comment on the

urgent need there is in all large towns for such an Exhibition as this promises to be. None are more familiar than our readers with the terrible waste in the preparation of food, especially among the poor, or the ignorance of sanitary details, even where there is an enlightened appreciation of the importance of hygienic laws. The only way, or at least the most rapid mode, of correcting this state is by exhibitions, which to precept add the virtue of demonstration. The committee will do well to pay great attention to the strict classification and orderly arrangement of the exhibits, and to provide repeated opportunities for complete demonstrations. There is a natural tendency for exhibitions to aim at something else than the instruction of the humbler classes, and yet it is for them especially that the information they afford is most needed. Brighton has such advantages that she may surely command success in this enterprise, and we trust that its benefits will not only be seen in increased comfort, cleanliness, and happiness in all the houses in that borough, but that other towns may be impelled to imitate so good an example.

"KIDNAPPING A CLERICAL BRIDEGROOM."

THE experiences of the Rev. Bruce Kennard, doubtless most distressing to their victim, are interesting to the medical profession and the public, as showing what *may* be done with impunity under the cover of custom—unhappily custom as regulated by law—in the treatment of lunatics. The community, as represented by the Legislature, sanctions the summary arrest and forcible removal of any person who is, *or may be*, alleged to be of unsound mind or a lunatic. A mere suspicion will practically justify the use of straitwaistcoats, handcuffs, and even gags—or such use of the hands as will fulfil the purpose of a gag. It is common enough to find the reputed subjects of mental disease taken to an hotel, to be there visited by medical men and certified. The more openly the kidnapping of a person alleged to be a lunatic is performed, the less attention will it excite. The cries, struggles, vehement protestations, and frantic or pitiful appeals for help which may be made by a man or woman said to be insane are not only of no avail to secure assistance, but are readily—and, by the force of custom, naturally—construed as evidences of insanity, as proofs that strong measures are requisite. It is easy to see that this is a most painfully unsatisfactory state of matters. Grievous wrong may be done without attracting attention or being recognised in its real character. The mere fact of removing a sensitive person from his or her home either with violence or cruel deception is enough to upset the balance of a weak mind; and when to this is added the horror of confinement in a lunatic asylum, there is a more than sufficient "exciting cause" for the development of actual disease. Those who are familiar with the inner life of a modern madhouse, and who know how great are the efforts made to render these establishments agreeable places of residence, are apt to forget the effect which must be produced on the mind of a self-conscious person by the discovery that he is believed to be insane and condemned to live among lunatics, even though it be for a probably short period. If the mind is not very strong, this discovery is more than likely to crush it. There is, therefore, a chance that if an objectionable person, say an eccentric elderly relative, with a hypochondriacal tendency, and property at his disposal, can be hurried from place to place and irritated in the way Mr. Kennard was irritated, he may be thrown into such a state of excitement that he will readily pass through the process of "certifying," and may be put away where any latent disease is sure to be roused into action. It is a duty we owe the profession and the public to lose no opportunity of exposing the mischievous tendency of the lunacy laws, which entrust the power of arrest and imprisonment to private persons. It is a delusion to suppose the jurisdiction of the Commissioners in Lunacy affords any protection. An alleged, and in time, asylum-made lunatic may be incarcerated and die, or be transferred, long before the Commissioners visit the establishment in which a "recent" case is incarcerated. Meanwhile, all that is done is to see that the certificates are *en règle*, which means that the blank spaces are properly filled, chiefly in regard to needless matters. The law is insufficient in itself, and red tape rules everything at Whitehall. The lunatic, or suspected lunatic, is a person who may be treated as a prisoner, although he has done no wrong, and from first to last—that is, from the first moment of his becoming, or being considered, insane to that at which he can make his escape from an asylum, or by the pleasure of his custodians obtain his discharge—he is, in fact and practically, without protection, unless he has the good, or bad, fortune to be made a Chancery patient, when he will be taken under personal supervision. When will the whole subject of lunacy law reform attract adequate and serious attention?

"THE ABOLITION OF VERTIGO."

IT has been alleged in connexion with some recent performances, said to be hypnotic, that what was described as "the abolition of vertigo," in virtue of which a patient was enabled to spin round like a teetotum without giddiness, constituted a final proof that the exploit was not a mere feat of jugglery, but a veritable result of mental influences. It should be unnecessary to point out that gyration around a pivot made by the foot is a very old accomplishment, within the reach of every average stage dancer or acrobat. The "trick," or method of performing the feat, consists in fixing the eye on a central point around which the body moves in a circle. If the gaze be allowed to fall on objects lying outside the circle of movement traversed by the body, the external objects seem to move, or the body seems to move, and the visual impression gives rise to a feeling of giddiness. If, however, the eye be fixed on a point which is central to the body movement, and which does not appear to move, the impression of movement, so far as that depends on vision, is reduced to a minimum, and a trained performer, with a fairly steady nervous system and little or no disposition to vertigo, can spin round almost indefinitely. The feat is not, in fact, as difficult in itself as that performed by some of the one-legged dancers, or even certain of the pirouettes executed by particularly expert theatrical and circus dancers. The hypothesis of a physiological abolition of vertigo by hypnotism is groundless and unnecessary, and the performance has no scientific value or significance.

ON THE STUDY OF CANCER IN RELATION TO ITS CURE.

IN his inaugural address as President of the Liverpool Medical Institution, Mr. Reginald Harrison made some very apposite remarks upon the way in which a "cure" for cancer will most probably be found—viz., in its prevention. Asserting that cancer is a result of a physiological error or series of errors, he maintained that the discovery of any panacea for it would intensify the activity of its causes by removing the necessity for searching after them, and he pointed out that hope lies rather in attempts to unravel the pathological processes leading up to cancer. Drawing analogies from pyæmia, he showed how that scourge of surgery had been overcome by a patient study of its causes rather than by any remedial measures. We should hesitate to agree with Mr. Harrison in his estimate of the further value and work of pathological histology, although no doubt he is right in the view that it alone will not solve all the problems of the genesis of cancer. The relation of cancer to chronic inflammatory lesions, such

as the so-called psoriasis of the tongue and eczema of the nipple, is quite a new departure, and there is ground for the hope that the microscope will reveal many similar changes in other parts, as of a low sub-inflammatory mastitis in scirrhus of the breast. At any rate it is easy to see that the microscope, having probably done its best in elucidating the structure of malignant growths, may yet do good service by further careful research into the histological changes occurring previous to and at the first development of a cancer. The difficulties of such a study are great, not the least of which is that connected with obtaining the material. There is very much yet to be learnt about the general and local conditions influencing not only the first development of a cancer, but its particular structure and special clinical history, and it is by knowledge of such a kind that we may hope some day to be in a position to prevent its development altogether. Although there are assigned causes for cancer, they are rather expressions of, or cloaks for, ignorance than anything else, and it is not an exaggeration to say that we *know* nothing of the *why* and very little indeed of the *how* a cancer is first formed. The problem now appears difficult indeed, but it is not more obscure than others which have been successfully solved in the immediate past, and the principles that have proved sound in former investigations are those that should be followed in this. Scientific methods must be used to attain scientific knowledge and results.

PRESERVED VEGETABLES AGAIN!

WE do not know whether the purveyors of preserved vegetables are relapsing into their old bad practices in respect to the materials employed in the preparation of their commodities, and the manner of packing them in tins, but cases of considerable gastric disturbance following the use of preserved vegetables are once more attracting attention. Assuming—which is a liberal assumption—that the process of preserving is well ordered and properly carried out, and that the materials used are as pure and innocuous as they are alleged to be, there must be something very much amiss with the tins. Why not substitute bottles for tins, and take a little more care in the preparation? If these or other effective measures are not speedily adopted, it will become the duty of medical men to use their influence with families to abandon the consumption of preserved vegetables in any form. There is a growing tendency to eke out the supply of fresh vegetables by the use of preserved, and with their aid to prolong the season; but this practice must be interdicted unless the quality of the articles supplied is quickly improved.

SURGICAL NOTES OF THE IRISH LAND AGITATION.

IRISH practitioners for some months past have had considerable experience in treating cases of bullet and buckshot wounds—to say nothing of fractured skulls, bayonet and other injuries—which have come under their notice as a result of the various conflicts between the police and military with the mob. In Barrington's Hospital, Limerick, more than half-a-dozen men are at present lying suffering from gunshot wounds received in the recent riot at Limerick; and although no positive conclusion has been arrived at by the medical staff, there are hopes of recovery for all the sufferers. On the 21st August a herdsman was fired at by two masked men armed with revolvers, and received four bullets in his right side, from the hip to the knee-joint, which was fractured. Tetanus set in and the unfortunate man died on Sunday week, about a fortnight after his murderous assailants had wounded him. Recently at an attack on a gentleman's house for firearms, one of the party was killed by a revolver bullet through the head; and previously one of the police, a sub-constable named Fitzgerald, was shot in the right arm, and lies in Mill-street Union guarded by two policemen. In the latter case the bullet entered close to the wrist and penetrated for some distance up the forearm, lodging, it is believed, close to the elbow-joint, which latter, it is thought, is uninjured. Dr. Curtis of Cork and Dr. McDonnell of Dublin have been in consultation about Fitzgerald's wound, but so far the bullet has not been extracted, and they have not considered it necessary to perform amputation. These are only a few of the many casualties that the present land agitation in Ireland has given rise to, and there is no doubt that many cases escape notice, being carefully concealed by the peasantry.

MEDICAL WORK OF FRIENDLY SOCIETIES' ASSOCIATIONS.

THE work of these Associations is astounding. The reports of the one at York and that at Scarborough are before us. We can give only a few of the leading facts. At York the visits paid were 22,298; the consultations at the dispensary, 28,257; total, 50,555. The income of medical officers was £602 12*s.* 6*d.*, yielding something over 3*d.* per visit and consultation. The average cost of each prescription was 2¼*d.*; the drug bill being £444 11*s.* 4*d.* At Scarborough, for £379 9*s.* 7*d.* two medical men pay 7740 home visits and have 28,663 consultations at the dispensary; the average price per visit and consultation is 2¼*d.* Here the medical officer reports a considerable number of fractures, for which no extra fee is paid. It is worse even than the Poor-law system, which cheers the heart of the medical man by a small fee for an exceptional service. We regret to see Friendly Societies behave towards the profession in a way so unlike what it deserves at their hands. We still more regret to see gentlemen willing to take such appointments, even for a short time. Resignations are very frequent, and much more becoming than holding these appointments.

THE LARYNGOLOGICAL CONGRESS.

AT a meeting of the Sub-section for the Diseases of the Throat of the International Medical Congress the following resolution, moved by Professor Schnitzler of Vienna, was carried unanimously: "That, opportunity having now been afforded for the first time to laryngology to show its capabilities at an International Medical Congress, and its place amongst the recognised specialities being now fully secured, a repetition of isolated Laryngological Congresses is the less required; and that it is therefore desirable to abandon the plan adopted at the first Laryngological Congress held at Milan last year of holding a second meeting next year at Paris." Although the Section and the Congress are not the same bodies, and a resolution of one is not binding on the other, it is evident that as this resolution was carried by a meeting at which nearly all the leading laryngologists were present, the special Congress is practically defunct, or rather merged in the International Medical Congress.

SELF-HELP IN PERILS BY FIRE.

SEVERAL of the great fires which have recently occurred in the metropolis incidentally furnished lamentable proof of the vanity of trusting to self-help protection. Even when the most perfect appliances are close at hand and the fire is discovered sufficiently early to admit of its extinction, there is sure to be some fatal bungling or delay which renders the most valorous self-possession—when once the possession is recovered—useless. However excellent the precautions may be they cannot prevent the panic which seems to paralyse the minds of the inmates of a burning building at the moment of the alarm—that is, at the precise moment when

prompt action is required and likely to be successful. The moral of the experience which has been purchased and repurchased at great cost is plainly that, for the preservation of life and property we must always look to external agencies. The presence of what are called "firemen" on the premises is of little or no use. It is to the prompt aid of the fire brigade from without we must look for safety.

PELLAGRA.

CONSPICUOUS alterations in the cutaneous nerves in pellagra have been found by M. Dejerine. The nerves of the skin in which the eruption was situated presented very few healthy fibres; most of the fasciculi consisted of only empty sheaths, not more than one in thirty or forty contained a nerve fibre. The appearance was that of the peripheral part of a nerve which had been divided several months previously, rather than of a normal nerve. The empty sheaths were folded longitudinally by bending in of the wall, and presented nuclei at regular intervals. In every preparation a certain number of nerve fibres were met with, which presented the characteristic lesions of parenchymatous neuritis in different degrees of development. The lesions are the more pronounced the longer the case has lasted. It is assumed by M. Dejerine that the nerve lesions are primary, and that the alterations in the skin must be placed in the category of trophic changes.

TO meet the wants of the dense population in the south-eastern districts of London, now dependent for hospital accommodation on Guy's and St. Thomas's, and at the same time to perpetuate the memory of the late Canon Miller, it has been decided to set about raising £10,000 for the purpose of erecting a hospital in the rear of the Royal Kent Dispensary. One of the wards of the proposed institution is to be called the Miller Memorial Ward. Upwards of £1200 has already been secured.

AN interesting series of lectures will be given in Glasgow during the coming winter, under the auspices of the "Combe Trust." The trustees have been fortunate enough to secure the services of Drs. Gairdner, McKendrick, J. B. Russell, Geo. Buchanan, McCall Anderson, Young, Wm. Wallace, W. L. Reid, Macleod, and Yellowlees. The subjects—Bodily Waste and Repair, the Care of the Body, Small-pox and Vaccination, Our Unbidden Guests, &c.—are of popular interest, and should attract large audiences.

AN officer of the Rifle Brigade, who was an inmate of the officers' wards, Royal Victoria Hospital, Netley, for some months suffering from severe wounds, has presented a handsome engraving of one of Landseer's pictures to the hospital, "as a small token of thankfulness from one who received every attention and kindness during his stay there from both medical officers and nurses."

HYDROPHOBIA has made its appearance again in the neighbourhood of Glasgow, at the village of Cathcart. The victim in this instance is a little boy, who was bitten by a dog ten months ago. It was only about the middle of last week that the first symptoms were noticed. It is very remarkable that so many of these cases should have occurred in and around Glasgow during the last few years.

DR. FREDERICK P. HENRY of Philadelphia has gained the Cartwright prize, awarded this year for the first time, for his essay entitled "Observations with the Hæmacytometer upon the Globular Composition of the Blood and Milk."

CHOLERA still prevails extensively at Meean Meer, Lahore, and the surrounding villages. A number of fatal cases having occurred in the Lahore gaol, the prisoners have been moved into camp—a sanitary precaution which entails a strong native Infantry guard being told off to protect the camp and prevent escapes.

A CASE is reported of a man who had died in the Holborn Poor-law Infirmary, and who was buried without the death having been registered, or a medical certificate of the cause of death given. The Board of Guardians have given instructions that the Registrar-General should be made acquainted with the circumstance.

M. PASTEUR has, it is reported, resolved to visit the Bordeaux lazaretto to study yellow fever, and ascertain whether it is due to a parasite, and can be guarded against by inoculation.

THE Queen has been pleased to appoint Paulin Orgias, Esq., M.D., Principal Medical Officer of Grenada, to be an official Member of the Legislative Council of that island.

DUKE THEODORE of Vienna, who, it will be remembered, obtained his M.D. degree a short time ago, is the President of the German Sanitary Congress opened on the 14th inst.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL INSPECTORS OF THE LOCAL GOVERNMENT BOARD.

Ilkestone (Derbyshire).—This report refers to an inquiry made by Dr. Blaxall into an exceptional mortality from enteric fever in the town of Ilkestone, as shown by the Registrar-General's returns in the third quarter of 1880. Ilkestone is described as a long straggling town, standing on hills extending north and south along the west side of the Erewash Valley, which is traversed by the Erewash river and canal. The soil and subsoil are of a clayey character, overlying the coal measures. The population is estimated at 12,600, and is chiefly occupied in coal-mining, ironworks, and lace factories. The sanitary condition of the town had attracted the attention of the Government in 1870, and been made a subject of inquiry by Dr. Buchanan, under instructions from the Privy Council Office. Since that time, Dr. Blaxall tells us, the sanitary authority have not been altogether unmindful of the duties imposed upon them by the Legislature, "but, through the want of sustained effort on their part, the measures undertaken have not fulfilled the desired end, while there has been a total want of remedial action in respect to certain conditions which exercise a very prejudicial effect upon the public health." Enteric fever, it was found, had been more or less prevalent in the town since June, 1879, but the disease had undergone a considerable development during the third quarter of 1880. In the course of that year the malady had shown itself in 105 houses, the number of cases amounting to 191, of which 17 were fatal. The fact of the fever having been so long present in the town, and of its having been found everywhere within the place, "rendered it impracticable," writes Dr. Blaxall, "to trace out precisely the origin of individual cases; but investigation of the circumstances attending the sudden and maintained increase of fever, particularly in certain localities, tended to throw much light upon its causes, and pointed to some of the unwholesome conditions detailed in the Report as concerned in the spread of the disease. Sewer air was found to be especially implicated as the main channel of infection." The unwholesome conditions enumerated, in addition to defects of sewerage and drainage leading to the fouling of

the atmosphere in and about the town with sewer air, were infected privies, the common midden privy continuing here in use notwithstanding its obvious mischievousness, and the pollution of the water from wells and tanks, of which many are still in use, and which are hollowed out in soil fouled with many years' soakage from privy pits and refuse receptacles. As Dr. Blaxall sums up—"1. The spread of the fever in Springgrove and Westley-street is referable to the drinking of specifically polluted well-water, or to exposure to exhalations arising from infected privies. 2. The incidence of the disease on the specified area about Rutland-street was due to infected sewer air escaping within and around the dwellings, associated in some cases with the drinking of water contaminated by air arising from infected sewers. 3. In other parts of the town sewer air would appear to have played an important part in the dissemination of fever." The sanitary authority of Ilkestone have much to do before they can place the population of the town in a reasonably safe sanitary condition, and it is to be hoped that one of the results of this inquiry by Dr. Blaxall will be to quicken and steady their efforts to this end.

Halifax: Scarlet fever.—In the autumn of 1880 and winter of 1880–81 an unusual prevalence of scarlet fever in the borough of Halifax, and the alleged development of the disease from the use of milk infected with the contagium of the malady, attracted considerable public and professional attention, to which we had occasion to refer at the time. The attention of the Local Government Board was called to the outbreak, and to the circumstances under which it was alleged to have occurred, by local communications from medical men and others, and Dr. Ballard was instructed to make a detailed inquiry into the subject. Dr. Ballard's official report has now been issued, and although we have already had occasion to refer to this report as the results were made known at the time of inquiry in the local press, the report itself well repays further consideration. It deals with 510 cases of scarlet fever as they occurred in 281 separate families during the months of November and December, 1880, and of January and February, 1881. The number of cases here stated do not represent the entire number which occurred during this period, and probably there were half as many more, but they include all those of which Dr. Ballard found it practicable to obtain definite information at the time of his inquiry. From November to the last week of 1880 and during the second and third weeks in January the prevalence of scarlet fever in Halifax exhibited no unusual phenomenon, but in the last week of 1880 an increase of the disease commenced, which in the course of the two weeks following attained extraordinary dimensions, and which it was presently observed was not general throughout the borough, but was practically limited to adjoining municipal districts (wards), and, moreover, was common to all classes of families residing in those wards. The inquiries of the medical officer of health of the borough, Mr. Ainsley, led him to the conclusion that the extraordinary outburst of scarlet fever observed in the first two weeks of 1881 was occasioned by the distribution of milk among the families affected, which had became infected with the contagium of scarlet fever in connexion with the attendant who had the charge of milking the kine and distributing the fluid to the customers, scarlet fever existing in the family of the attendant at the time. This attendant's dwelling and the dairy farm were both in a locality outside the limits of the borough. This conclusion was not accepted to any large extent by the medical practitioners in Halifax, but Dr. Ballard's detailed inquiry has shown that it was substantially correct. He observes that "it is clear, at any rate, that of those households which were on the milkman's list of customers, an overwhelming proportion of those unquestionably susceptible of invasion were invaded by scarlet fever in one form or other." But this is not the whole of the story of the recent prevalence of scarlet fever in Halifax. What follows we give in Dr. Ballard's own words:—"After making every possible admission as to the influence of the milk-supply distributed by B——, the large majority of the household invasions that occurred during this epidemic must be attributed to the customary methods of communication of this highly infectious disease. That such ordinary modes of spread were operative has been demonstrated to me by numerous individual instances in which persons first attacked in a family had been shortly before in direct or mediate communication with others ill with the disease. In such a case as this, it would be impracticable to trace out all the channels, some of them tortuous and obscure, by which the contagion may have travelled from the sick to the healthy; nor, with our knowledge of the fact that such channels are very numerous as well as obscure, is it necessary to do so. They are known to exist in abundance, although they may not be always easy of identification. It is matter for regret that the occurrence of five deaths in December was not made the occasion for any attempt at discovering the extent of prevalence of the disease; the circumstance was not regarded as having anything special in it to command attention. And even on the rapid development of the epidemic in the first week of the new year the statutory means of arresting the epidemic were but very imperfectly employed. The distribution of milk by the infected carrier was indeed properly arrested, advice as to the closure of schools (already closed for the holidays) and of public libraries, and as to the postponement of parties, &c., was given and generally adopted, excrement pails were more frequently removed from infected localities, and sewers were flushed; but there the action of the sanitary authority stopped. The measures specially calculated to arrest the spread of scarlatina—namely, isolation of the sick and disinfection of infected houses, rooms, and things—were hardly at all adopted by them."

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kensington (*Metropolis*).—Dr. Orme Dudfield's report on the sanitary condition of his district during the year 1880 has the special characters of previous annual reports he has prepared for the sanitary authority. It gives quite an exceptional insight into the sanitary administration of a great metropolitan parish, while at the same time it does not omit from consideration any important health question which concerns the parish in common with other London parishes and sanitary districts. It is this latter feature of Dr. Dudfield's annual reports which is characteristic of them, and which gives them their peculiar value. In these reports, and in these alone, we have a general view of the public health questions with which the metropolis, in its several sanitary areas and as a whole, has had to deal during the years to which the reports refer; and hence they have a special and increasing importance to the student of public health matters as they affect the metropolis, and will prove invaluable to the future sanitary historian. The subjects considered by Dr. Dudfield's report for 1880 are so numerous as to preclude us from commenting upon them in detail, and his large experience in the sanitary administration of an extensive district give to the observations he is pleased to make upon them a very high value equally to the medical officer of health, the politician, and the ratepayer. We commend this report particularly to the attention of our readers.

Whitechapel (*Metropolis*).—Mr. Liddle's report for the quarter ended July 2nd, 1881, has some important observations on the Artisans and Labourers' Dwellings Act, 1875. We would particularly direct attention to his remarks upon the need for a stringent new Building Act in the metropolis, without which it is to be feared that the new buildings upon cleared areas will reproduce many of the evils for which the clearance of the areas was effected, and will render necessary at a future period the removal of the buildings which may replace those destroyed under the Artisans and Labourers' Dwellings Act, 1875.

Fulham (*Metropolis*).—Mr. Collier, in his report for the Fulham district for 1880, states that the recent census has shown that the population of the district in 1881 is nearly double that which existed in 1871. The death-rate of the district during 1880 was 19·5 per 1000 of the inhabitants, being 2·7 less than the death-rate of all London, which was 22·2. The death-rate of the district, in fact, decreased during the year, notwithstanding the largely increased number of the population. Indeed, Mr. Collier remarks that "for a period of twenty-five years your board [the District Board of Works] has been constituted, and as a matter of fact the fruits of your labours have been that the condition of public health in your district *has continued to improve more and more during every year that you, as a public body, have been in existence.*" Taking the records of infantile mortality as a test of the condition of public health in the district, Mr. Collier shows that the percentage of deaths of infants under five years of age, as compared with the total deaths registered, had declined to 30·1 in 1880 from 42·1 in 1855, and that the percentage of deaths of infants under five years of age, as compared with the total births registered,

which was 25·8 in 1855, had fallen to 15·8 in 1880. The chief interest of the report to the outsider rests in the account which it gives of the movements of the recent epidemic of small-pox in the Fulham district, and the influence exercised by the small-pox hospital on the prevalence of the disease in the houses nearest to the hospital. Mr. Collier prepared a special report for his Board on the latter question, and he repeats in the present report the conclusions of that report. The question is so momentous in relation to the subject of small-pox hospitals that we do not hesitate to repeat Mr. Collier's conclusions here:—"1. That in a crowded city the presence in a district of a large small-pox hospital receiving cases from a number of other districts is almost sure to be the cause of the disease being more prevalent in the district than it otherwise would be without the presence of the hospital. 2. That the disease does not spread from a small-pox hospital by the diseased particles being carried long distances through the air, and that scientific evidence on the subject as yet adduced is against the probability of the disease being carried through the air for a longer distance than ninety feet. 3. That it is chiefly by indirect means that a small-pox hospital is the cause of the disease being more prevalent in a district. 4. That there is always a probability of the disease being spread to a slight extent by officials, no matter how stringent the regulations may be. 5. That in the removal of cases the disease may be spread by officials who have neglected to use proper precautions to disinfect themselves. 6. That nurses and other persons employed in attending upon the patients may be the means of spreading the disease if they are allowed to leave the hospital enclosure. 7. That letters sent out of the hospital may be the means of communicating the disease. 8. That under proper management and stringent regulations these causes of danger are reduced to a minimum. 9. That the disease is very liable to be introduced into a district where a small-pox hospital exists, by means of infected persons coming from infected houses to the locality of the hospital for the purpose of making inquiries or seeing relatives who are dying. 10. That the very large majority of the cases of small-pox that occur in any district are contracted from other cases that have been concealed and treated at home within the district. 11. That it is detrimental to a patient's chance of recovery to be treated in a hospital with a large number (over fifty) of other cases, for under such circumstances the atmosphere is liable to become much polluted with the impure exhalations from the patients. 12. That as small-pox is a disease which is accompanied with great prostration, the severe cases ought not to be removed long distances. 13. That each district ought to be provided with a hospital or hospitals for the proper isolation of all cases of infectious diseases occurring within its area, which cases cannot with safety be treated at home. 14. That there would be much less danger of the disease being spread through a number (one to each district) of small hospitals, under proper regulations and management, than there is with the several large hospitals now in use in the metropolis." Mr. Collier in his report for the second quarter of the present year states that on April 29th last while in other districts of the metropolis, not less than 1500 cases of small-pox were being treated in their homes for want of hospital accommodation, not a single case had occurred in the Fulham district that had not been isolated in hospital, when such isolation had been found necessary, by the authority, and this notwithstanding the opposition which had been experienced by the District Board in providing hospital accommodation.

A MURDEROUS PRACTICE: ANTI-VACCINATION.

The chairman of the Rotherhithe Vestry, at a recent meeting, was induced to use the just term "a murderous practice" with regard to a course of procedure of which the following is an example, furnished to the vestry by a report from the public vaccinator, Dr. Beech Johnstone, of No. 3 district, St. Olave's Union. A child of a noted anti-vaccinationist falls ill with small-pox. The mother nurses the child, and is next seized with the disease. Then five other children of the same family are attacked. The mother and two of the children die. The father, the anti-vaccinationist, borrows a suit of black clothes from a neighbour to attend his wife's funeral, and returns the suit to his neighbour without disinfection, after having kept it several days in the infected house. The neighbour contracts small-pox and also dies. The infection spreads in the vicinity of the anti-vaccinationist's house, to do, as yet, untold mischief. The Rotherhithe Vestry prosecuted the anti-vaccinationist for having neglected to carry out the disinfection of his house and premises. But he was able to show that certain processes of disinfection had been carried out under the instructions of his medical attendant, and by a person employed to disinfect by the neighbouring parish of Bermondsey, and the summons was dismissed.

At a meeting of the Corporation of Dublin, held last Monday, a recommendation of the Public Health Committee was adopted, to the effect that Dr. Cameron should be appointed to the entire charge and control of the sanitary department at a salary of £1000 a year. It is understood that Dr. Cameron will devote his entire time to the duties of the office, including regular daily attendance at the City Hall, and will abandon all professional emoluments save fees as analyst from provincial public bodies and his lectureship on chemistry in the Royal College of Surgeons.

The Chertsey Rural Sanitary Authority are about to consider the propriety of establishing a sewage farm at Byfleet for the utilisation of the sewage of Chertsey, Weybridge, and Oatlands. Inhabitants of Byfleet protest against the proposition, setting forth the customary objections to a sewage farm—to wit, fear of nuisance from the farm, possible injury to the health of the district, and its prejudicial influence upon the value of neighbouring property.

Scarlet fever is epidemic at Prestwich, Lancashire. The Local Board of Health have recommended the closing of the schools for a time, but school managers in the district are by no means unanimous in carrying out this recommendation, and the board proposes to appeal to the Local Government Board on the subject.

It is stated that the Leicester School Board intend to take proceedings against a metropolitan union for alleged carelessness in allowing a boy, who had slept next to a patient ill with small-pox, to be sent to an industrial school at Desford.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

English urban mortality continues exceptionally low. During the week ending last Saturday 5142 births and 2521 deaths were registered in twenty of the largest English towns. The births were 44 and the deaths 736 below the average weekly numbers during 1880. The annual death-rate in these towns, which had been equal to 17·4 and 18·1 in the two preceding weeks, declined to 17·3 last week. The lowest rates in these towns last week were 12·1 in Oldham, 13·8 in Leeds, 14·4 in Wolverhampton, and 14·9 in Bristol; in other towns they ranged upwards to 20·3 in Nottingham, 26·7 in Leicester, 28·2 in Liverpool, and 30·6 in Hull. The deaths referred to the principal zymotic diseases in the twenty towns were 435, and included 135 from scarlet fever, 119 from diarrhœa, 57 from fever (principally enteric), 48 from whooping-cough, 33 from measles, 27 from small-pox, and 16 from diphtheria. Scarlet fever showed the largest proportional fatality in Hull, Nottingham, Leicester, and Sunderland; this disease has caused no less than 175 deaths in Hull since the end of June, of which 26 were recorded last week. Deaths from diarrhœa were unusually few for the season. Small-pox caused 27 more deaths in London and its suburban districts, and 1 in Liverpool. The number of small-pox patients in the metropolitan asylum hospitals, which had been 557 and 582 at the ends of the two previous weeks, declined to 528 on Saturday last; these included 130 in the *Atlas* hospital ship, and 58 in the Convalescent Camp Hospital at Darenth. The new cases admitted to these hospitals during last week declined to 68. The deaths referred to diseases of the respiratory organs in London, which had been 115 and 131 in the two preceding weeks, further rose to 156 last week, but were 9 below the corrected average weekly number. The causes of 56, or 2·2 per cent., of the deaths in the twenty towns last week were not certified either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths did not exceed 1·2 per cent. in London, whereas it was equal to 3·1 in the nineteen provincial towns. All the causes of death were duly certified in Brighton, Plymouth, Wolverhampton, Nottingham, and Leeds; while the proportion of uncertified deaths was largest in Newcastle-upon-Tyne, Bristol, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in eight of the largest Scotch towns, which had been equal to 18·9 and 18·8 in the two preceding weeks, further declined last week to 18·0; this rate was, however, 0·7 above the average rate that prevailed in the twenty English towns. The rates in the eight Scotch towns ranged from 14·3 and 15·3 in Aberdeen and Dundee, to 19·5 and 20·6 in Greenock and Glasgow. The deaths referred to the principal zymotic diseases in the eight towns were 83 last week, against 78 and 73 in the two previous weeks; of these, 30 resulted from diarrhœa, 12 from scarlet fever, 12 from diphtheria, 10 from "fever," 10 from measles, 9 from whooping-cough, and not one from small-pox. The annual death-rate from these zymotic diseases averaged 3·6 per 1000 in the eight towns, and exceeded by 0·6 the average rate from the same diseases in the twenty English towns. The 30 fatal cases of diarrhœa were within one of the number returned in the previous week, and showed a higher death-rate than that which prevailed in the English towns. The deaths from both scarlet fever and diphtheria were more numerous than those in the previous week; scarlet fever caused 6 deaths in Glasgow and 4 in Edinburgh, and 10 of the 12 deaths from diphtheria occurred in Glasgow. The 10 deaths referred to "fever" (typhus, enteric, and simple) were 2 less than those in the previous week, and included 4 in Glasgow and 2 in Edinburgh. Nine of the 10 deaths from measles were returned in Glasgow; and 4 of the 9 fatal cases of whooping-cough in Edinburgh. The deaths referred to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy), which had been 70 and 89 in the two previous weeks, declined again to 79 last week; they were equal to an annual rate of 3·4 per 1000, which exceeded the rate that prevailed from the same causes in London.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had not exceeded 16·6 and 19·3 per 1000 in the two preceding weeks, further rose to 21·9 last week. During the eleven weeks ending last Saturday the death-rate in the city averaged 20·0, against 21·1 in London and 16·7 in Edinburgh. The 147 deaths showed a further increase of 18 upon the low numbers in the two previous weeks, and included 14 which were referred to the principal zymotic diseases, of which 7 resulted from diarrhœa, 3 from fever (typhus, enteric, or simple), 2 from scarlet fever, and 1 each from measles and diphtheria. The annual death-rate from these zymotic diseases was equal to 2·1 per 1000, while the rate from the same diseases was 2·5 in London and 4·1 in Edinburgh. The deaths referred to "fever," which had been 3 and 5 in the two preceding weeks, declined again to 3 last week, and were equal to a rate which nearly corresponded with that which prevailed from the same cause in the twenty English towns. The 7 fatal cases of diarrhœa in Dublin exceeded the number in recent weeks. The deaths both of infants and of elderly persons showed a considerable increase upon recent weekly numbers.

VITAL STATISTICS OF LEEDS.

We have frequently called attention to the untrustworthiness of American mortality statistics due to the random estimates of population arising from the ambition of American towns for rapid growth. We have especially criticised severely the unwillingness of the municipal authorities of American towns to accept the results of census enumerations if they expose the fallacy of exaggerated estimates of population. We are somewhat surprised to observe hesitation in accepting the results of the recent census in Leeds, on the part of the medical officer of health for that borough; this is the more remarkable as no motive is assigned for thus rejecting the new population figures for Leeds, which have now for some months been adopted by the Registrar-General as the basis of all his vital statistics for the borough. On the assumption that the rate of increase of population which prevailed between 1861 and 1871 had since been maintained, the Registrar-General estimated that the population of Leeds in the middle of 1881 would be 326,158. The present estimate of the population of the borough, based upon the number enumerated in April last, is only 310,490, and 15,668 less than the estimate previously in use. The substitution of the new for the old estimate had the effect of raising the calculated rate of mortality in the borough by rather more than 5 per cent, or by a twentieth. Thus the annual rate of mortality in the borough for the week ending May 28th, when the new estimate was first adopted in the Registrar-General's weekly return, was published as 20·7 per 1000, whereas if calculated upon the larger estimate previously used, but then discarded as untrustworthy, it would have been given as 19·7. This source of inaccuracy affects a report recently issued by Dr. Goldie upon the health of Leeds during the last ten years, 1871–80, from which it was evident that the results of the census of 1881 were entirely ignored in the calculations given in the report. It is true that the broad results pointed out by Dr. Goldie were not thereby seriously affected; but inaccuracy of this character in vital statistics is always to be regretted, as it frequently discredits even more than it invalidates them. Dr. Goldie gave the Leeds death-rate in the last half of the recent decade as 22·9 per 1000, instead of 23·8, which is certainly nearer the truth. All his death-rates for these five years were to the same extent understated. At the same time the corrected figures show nearly as forcibly the marked decline in the death-rate and the improvement in the health of the borough in recent years. The crude death-rate in the last five years showed a decline of 14 per cent. compared with that which prevailed in the preceding five years. The mortality from the principal zymotic diseases in the same periods had, moreover, decreased by 33½ per cent., or by more than a third.

DIARRHŒA IN LEICESTER.

Notwithstanding the intense heat of July, the unseasonably cold weather during August caused the fatality of infantile diarrhœa during the past summer to fall below the average. With reference, however, to the Local Government Board inquiry into the causation of this fatality, now being conducted by Dr. Ballard, the experience of the past summer has shown the usual marked local variations which constitute one of the most remarkable features of this summer scourge. It appears from the Registrar-General's Weekly Returns that, during the ten weeks ending the 10th instant, the annual death-rate from diarrhœa in the twenty large English towns, dealt with in those returns, averaged 2·8 per 1000. Whereas, however, the rate of this fatality did not exceed 0·7 in Plymouth, 0·9 in Bradford, and 1·1 both in Oldham and Bristol, it ranged upwards in the other towns to 3·4 in Hull, 4·0 in Leeds, 4·3 in Nottingham, and was no less than 6·8 in Leicester. The excess of diarrhœa fatality in Leicester is of annual occurrence, but the proportion of this excess is larger than ever this year, and it may be hoped that Dr. Ballard will be able to throw some light upon the fact that during the past summer the death-rate from this disease has been more than six times as high in Leicester as in the manufacturing towns of Oldham and Bradford. It is satisfactory to know that during the past ten weeks all the causes of death in Leicester, with the exception of nine, were duly certified by a registered medical practitioner, or by the borough coroner. It will be possible, therefore, to obtain the results of the medical observation of nearly all the 160 fatal cases of diarrhœa in Leicester during the past ten weeks.

THE POPULATION OF INDIA.

Mr. Plowden, the Census Commissioner of India, has just issued the completed totals of the Indian population, which was enumerated in February last, and claims for this census that it is the largest work of the kind ever undertaken. The grand total of this Indian population exceeds 252 millions; of these, 69 millions were recorded in Bengal, 31 in Madras, 21 in Bombay, 23 in the Punjab, 33 in the North-West Provinces, 12 in the Central Provinces, 11 in Oude, 5 in Assam, 4 in Burmah, and 4 in Mysore. The recorded increase of the Indian population since the last census very nearly approaches 13 millions. The rate of increase per cent. in the last inter-census period was no less than 35 in Burmah, 25 in the Central Provinces, and 19 in Assam. The only provinces showing a decrease of population are Mysore and Madras, where its proportion was equal to 17 and 2 per cent. respectively. The returns showing the proportions of the sexes in the population are not complete, as this information does not appear to have been collected in some of the smaller States; of the 241 millions of persons, however, enumerated in the rest of India, 123 were males and 118 females, showing nearly 105 males to each 100 females. Thus in India the proportional excess of males in the population is nearly equal to the excess of females in the English population.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE TRADES' UNION CONGRESS AND SANITARY MATTERS.

It is particularly noteworthy that during the progress of the recent Trades' Union Congress "many delegates," as reported, directed the attention of the Congress, by special instances, to the insanitary and overcrowded state of small workshops and rooms of dwelling-houses in which various industries were carried on, and that one delegate, Mr. P. Kenny, of the General Labourers' Amalgamated Society, moved for the insertion in the proceedings of a clause calling for the inspection "of all constructive and public works." That the influence of the trades unions should be enlisted on the side of the greater wholesomeness of workshops, workrooms, dwelling-houses, and the better construction of buildings, is a fact of which the importance, in regard to the future success of sanitary legislation and measures directed to increase the sanitary welfare of the working classes, cannot be exaggerated. Complete success is impossible in these matters unless the fullest co-operation of the working classes is ensured, and until, in fact, they take the subject largely into their own hands.

THE CHOLERA.

A highly improbable and wholly unconfirmed story has got into the public press, originating, it would appear, from Vienna, of an outbreak of cholera at Kremenetz, a town of Russian Poland, government of Volhynia, and situated near to the Austrian frontier. A panic, it is reported, prevails in the town, and all the schools have been closed. The Austrians, moreover, have instituted a military cordon on the frontier; but in respect to this cordon it is further stated that it has been established in view of the prevalence of cattle plague in the Russian provinces.

With respect to the recently reported outbreak of cholera at Aden, a correspondent of *The Times* has sought to show that the choleraic disease was the natural result of the Mahommedan fast of Ramadan, but he does not help us to an explanation of the probable reasons why an annual fast should be so rarely followed by choleraic symptoms which, as in the present instance, may be fatal in two hours. Obviously the letter is from some shipping agent, who would discredit the quarantine at Suez and Malta sure to follow the announcement of cholera at Aden. A telegraphic despatch from Alexandria, dated Sept. 20th, states that of seventy-eight cases of cholera at Aden fifty had ended fatally.

The arrangements for the inspection and improvement of the lodging-houses of Oxford do not appear to be working smoothly. The decisions of the University delegates have, in many instances, been challenged, and at a special meeting of the Local Board this week it was agreed that a conference should be held between the University and the city authorities on the plans of Mr. Griffith, C.E.

New Zealanders appear to be just now in a state of undignified alarm lest small-pox should gain a footing on their shores. To help to ensure against so terrible an invasion the Chinese Immigation Bill (says the *Colonies and India*) passed both Houses of the Legislature in double quick time.

THE SERVICES.

Surgeon-Majors Temple, V.C., Robertson, Orton, Kilroy, Surgeons Curtis, Struthers, Adams, Archer, Army Medical Department, and Surgeons Maclaren, Aratoon, Ross, and Adams, of the Indian Medical Service, are under orders to embark on board H.M. troopship *Jumna*, on the 22nd instant, for conveyance to Bombay.

Deputy Surgeon-General J. Holloway, C.B., has arrived home from the Transvaal on six months' sick leave, Deputy Surgeon-General J. Sinclair succeeding him as Principal Medical Officer in South Africa.

ADMIRALTY. — Surgeon Arthur Vereker Smyth has been promoted to the rank of Staff Surgeon in Her Majesty's Fleet, with seniority of the 17th of August, 1881.

The following appointments have been made: — Surgeon G. M. Cuffe to the *Antelope*, vice Browne; Surgeon Thomas Loane to Haslar Hospital, vice Cuffe; George Mair, M.D., staff surgeon, to the *Brilliant*, during drill season; L. T. Colthurst, M.D., surgeon, to the *Humber*, vice Newland; John Brunt, surgeon, to the *Agincourt*, vice Smyth.

PHARMACOLOGY AND THERAPEUTICS.

IRON AS A POISON.

ORFILA demonstrated that large doses of sulphate of iron will cause death with symptoms of collapse and insensibility, and, post mortem, congestion and ecchymoses in the gastro-intestinal mucous membrane, and remarkable black discoloration of the blood. Frank arrived at similar results, employing the citrate or bromhydrate. Recently Meyer and Williams have found similar effects from the subcutaneous injection of the potassio-tartrate of iron, slightly alkalised. Five or ten milligrammes constitute a poisonous dose for the frog, and forty milligrammes for a rabbit. In the frog, after absorption, there is paralysis of movement and disappearance of muscular irritability, without affection of the heart. In rabbits a great acceleration of the respiratory movements is first produced, and at the end of a little time diarrhœa comes on, with muscular weakness, while paralysis of movement, dyspnœa, and convulsions precede death. The lungs and heart are found healthy, the duodenum is swollen and hyperæmic, the mesenteric glands are engorged, and the liver, kidneys, and spleen are congested. Similar effects are produced in the cat by twenty or thirty milligrammes, and in the dog by rather less per kilogramme of body weight. The toxic symptoms are accompanied by a remarkable diminution of blood-pressure, explicable by vascular paralysis. There is also observed the black tint of the blood signalised by Orfila, which is not, as might be imagined, due to the accumulation of carbonic acid in the blood, since analysis proves that this is really diminished.

MERCURY.

After the inunction of the ointment of mercury in rabbits and men, Furbrenger failed to discover any trace of mercury in the rete Malpighii of the skin, but globules were visible in the hair-follicles and in the sweat-ducts. If, however, the epidermis was first removed, the metal was then found in the corium, but only a few isolated globules could be seen in the deeper layers of the skin and in the subcutaneous tissue. After exposure to mercurial vapour no mercury could be found in the hair-follicles or sweat-ducts, although the surface of the skin was covered with a grey deposit. Twenty-four hours after an injection of a mercurial emulsion into the jugular vein the presence of dissolved mercury in the blood could be demonstrated in five out of eleven experiments, and the liver always contained mercury in a state of solution. Hence it seems certain that metallic mercury becomes dissolved in the blood. The metallic mercury in the hair-follicles was considerably diminished in quantity in eight days, and those globules which remained were oxidised on the surface, angular, and dirty black in colour. It is probable that the fatty acids of the skin assist in the solution. Oberländer has found that silver could be detected in the urine 190 days after the cessation of a course of inunction. The excretion was not, however, uniform, but presented remissions and exacerbations, the former occasionally of ten days' duration. A course of treatment by sulphur waters seemed to make no difference to the excretion, and no influence could be ascribed to salt baths, soda baths, or vapour baths. He concluded from his experiments that mercury is probably excreted largely by the liver and intestine. Although the action of mercury has been much studied, little attention has been given to the lesions which are found when death results from its action. Mering has produced in cats all the symptoms of chronic mercurial poisoning by injecting daily a solution of oxide of mercury in glycocoll—stomatitis, salivation, anorexia, diarrhœa, anæmia, prostration, albuminuria. After acute poisoning the autopsy uniformly revealed intense hyperæmia of the gastro-intestinal mucous membrane, and often actual erosions. The lesions were most intense in the lower part of the small intestine. Occasionally hæmorrhages were found in the cardiac muscle, and ecchymoses in the bladder. The liver and kidneys were intensely congested. After chronic poisoning there was found a similar inflammation of the

gastro-intestinal mucous membrane, ulceration in the small intestine, and a still more severe affection of the large intestine. Ulceration in the mouth and necrosis of the maxillary bones were also common. These effects are regarded less as due to a general cachexia than to the localised action of mercury on the different organs.

CARBOLIC ACID.

The toxic effects of the use of carbolic acid in surgery give importance to the symptoms resulting from its administration in large doses. Injection into a vein has been found by Gies to be followed by an immediate fall in the blood-pressure, due to a special action on the medulla and the depressor nerve. Division of the medulla oblongata prevents it. It has long been known that carbolic acid causes convulsions, which are arrested by section of a nerve, and are therefore clearly due to the action of the poison on the nerve-centres—the spinal cord according to Salkowski, the brain according to Husemann. Gies has shown that an effect on the muscles is also produced. They are rendered less irritable, and at the same time their contractility is less easily exhausted. He corroborates the occurrence of diaphoresis and salivation as symptoms of the toxic action of the poison, and shows that they depend on its effect on the central nervous system. The depression of temperature produced by carbolic acid has been studied by Menville. Toxic doses will reduce the body heat of a dog to 92° or 93°, but with smaller doses the depression is preceded by a transient elevation. A gramme administered as an injection in a case of typhoid fever reduced the temperature in two cases from 104° to 97°, and the fall was accompanied by a notable degree of collapse. In a case of antiseptic dressing recorded by Berger, the temperature fell to 94·5°. The use of repeated rectal injections of carbolic acid has been advocated by Desplats as a most valuable means of keeping down the temperature in acute febrile diseases. According to an investigation by Prudden, although strong solutions of carbolic acid produce an immediate cessation of all movement in living ciliated cells, or colourless blood-corpuscles, quickly breaking up the protoplasm, weak solutions only retard the movements, or arrest them for a time, and they return when another solution is substituted for that of carbolic acid. Weak solutions are also found to hinder or arrest the migration of white corpuscles from the vessels when inflammation is artificially excited in the frog's tongue or mesentery. It is probably to this influence that some of the utility of carbolic acid antiseptic dressing is due.

ERYTHRINA CORALLADENDRON.

MM. Bochefontaine and Rey have investigated the physiological properties of this plant, the bark of which is employed by the natives of Brazil as a sedative, under the name of "mulungu." It is chiefly given in the form of an extract, but also as a tincture and infusion, all of which seem to be active, and to contain an alkaloid which is soluble in water. In the frog a moderate dose causes general muscular relaxation, and loss of the excitability of the motor nerves. The effects last about eighteen hours, and then pass away. If, however, the dose is larger, there follow abolition of reflex action, and, usually, the death of the frog. Strychnia seems to antagonise it, and to restore movement, excitability, and reflex action. In the guinea-pig no effect is produced for some hours, and then a rigor occurs, followed by vomiting, micturition, and defecation, and these by similar muscular weakness and relaxation, with retardation of the pulse and respiratory movements, and fall in temperature. The muscular relaxation is varied by attacks of convulsive shaking, which increase in severity and duration, and may be accompanied by rigidity. Death occurs suddenly by arrest of the pulse and respiration. In the dog the symptoms are very similar, and the prostration is profound, but without entire loss of sensibility. After seven or eight hours the animal may die or may slowly recover. The loss of reflex action and the convulsions observed in the frog do not seem to be produced in the mammalia. The symptoms in the dog are very similar to those caused in that animal by morphia, but with greater muscular prostration. Its effects on man could not be ascertained on account of the small quantity which was at the disposal of the investigators.

THE CONSTITUENTS OF PODOPHYLLIN.

A colourless substance has been obtained by Podwyssotzki from the rhizome of podophyllum peltatum, crystallisable with difficulty, scarcely soluble in water, but dissolving readily in alcohol with an acid reaction. It is extremely bitter in taste and intensely poisonous, cats being killed by from one to five milligrammes. It is proposed to call it podophyllotoxin. It may be obtained thus: if podophyllin is exhausted by chloroform, a brownish oily residue remains. On further digestion of this with chloroform in a salt bath, and then cooling the resulting coloured solution, a solid yellowish substance separates. The decanted liquid being evaporated and treated with oil of petroleum, podophyllotoxin is deposited as a white powder. Ammonia or lime water will also extract from commercial podophyllin two other substances, one of which is insoluble in water and very active. It also is extremely bitter, and it is proposed to call it picropodophyllin. The second substance has an intensely acid reaction, and combines with alkalies. It is soluble in hot water, and Podwyssotzki suggests for it the name of podophyllic acid. These two bodies exist in podophyllin in true chemical combination. The substance first separated in the production of podophyllotoxin is inactive, and crystallises in yellow needles; it presents the characters of quercitine. A greenish oil and a crystallisable fatty acid, both inactive, may also be obtained from the root.

Correspondence.

ON UTERINE CONTRACTIONS.

To the Editor of THE LANCET.

SIR,—Allow me to thank Dr. John Williams and Dr. E. Herman for having directed my attention to reports of cases where they had each noticed a change of density and shape in a soft uterine tumour at short intervals; and also to express regret I had overlooked their papers. In a high degree I value their powers of observation, and on that account would be prepared to assent that soft fibroids did contract something like the pregnant uterus; yet, inasmuch as during twelve years' observation directed to this point I have not been sufficiently fortunate to meet with such an instance, I must be excused if I venture to think that before it is accepted as a constant, or even frequent, fact further observations are required. However, should it be found that soft fibroids, as a rule, do change in shape and density as a pregnant uterus, yet one must concede that the existence of contractions, pointing as they necessarily do to the uterine nature of the tumour, forms a diagnostic symptom of very great value, even when taken alone. But in conjunction with the state of the menses we should have, in ordinary pregnancy, a means of diagnosing between a uterine tumour and pregnancy; for not amenorrhœa, but its opposite, is almost invariably constant in cases of fibroma. But even taken by itself the relaxation of the pregnant uterus takes place generally to a greater extent than the quiescent condition of a soft fibroid (supposing it does contract). Indeed, it is sometimes difficult to find the outline of the uterus when passive, and at this time the fœtus is generally to be detected by palpation; then, when contraction ensues, the outline is so marked, and the mass so firm, that no fibroid could give such a latitude of alteration. However, it is not in normal pregnancy that the contractions of a fibroma (should they be proved as usual) would affect our diagnosis. It would be in mole pregnancies where hæmorrhage occurred that the difficulty would be felt, for the symptoms would be very similar. It is important, therefore, that we should as early as possible accumulate evidence sufficient to place this matter on a clear basis. In the meanwhile I venture to assert that, amenorrhœa existing, if we find a tumour centrally and symmetrically placed above the pubes, and undergoing frequent changes in density, we shall be correct in ninty-nine cases out of a hundred if we declare pregnancy to be present, provided that we have ascertained there is no retention of urine. Taking another position, considering the infrequency of cases of soft fibroids as compared with those of pregnancy and the infrequency of symmetry in these few cases, we should, even taking the presence of frequent contractions alone, in diagnosing pregnancy in any symmetrical contracting tumour be right to an extent which would far exceed our accuracy of diagnosis in general. But our capability of diagnosis will be more than this, because in a large proportion of cases the flaccidity of the non-con-

tracted uterus is much greater than would be that of the fibroma we were supposing; and as in addition to this we should with ordinary care feel the fœtus, the difficulty caused to our diagnosis by a contracting soft fibroid (supposing still that were shown to be a common condition) will not be so great as suggested.

I am, Sir, yours truly,

George-street, Hanover-square, W. J. BRAXTON HICKS.

THE RUGBY OUTBREAK OF SORE-THROAT OF MARCH, 1880.

To the Editor of THE LANCET.

SIR,—It is with considerable diffidence that I differ from my friend the able medical officer of health for Mid-Warwickshire, Dr. George Wilson; but as I see an account of the said epidemic in THE LANCET, page 354, in which his view is stated, that it arose from milk-poisoning, I feel bound to put on record my dissent from this view, which he and I have discussed amicably together on several occasions. I believe it had nothing to do with milk whatever, but was owing to atmospheric conditions alone. It will be remembered what severe weather it was at the time, and how bitter and searching was the east wind. I believe it arose as influenza does, from the season, and the symptoms were analogous to, I may say identical with, influenza, with this exception, that, instead of catarrh of the eyes and nose, we had catarrhal sore-throat. All the other symptoms were absolutely identical with our usual epidemic influenza. The symptoms were: 1. Sudden onset of feeling of cold water being poured down the back, feverishness, aching of limbs, headache, malaise. 2. Very painful stiff neck. 3. Enlargement of submaxillary glands. 4. Ordinary catarrhal sore-throat in the majority of cases, but in some absent throughout. 5. It lasted about forty-eight hours. 6. It was in a few cases attended by sequelæ, true quinsy, pleurisy, acute rheumatism, or considerable debility. 7. None of the cases were followed by paralysis. Like influenza, a large proportion of the cases went down together; and although it proved very infectious, as I shall show, yet I could never trace the period of incubation; but I should say it was, like influenza, extremely short—a few hours only. This epidemic was co-existent, I am told, in several villages round; and a medical friend who was staying at Hastings told me a similar epidemic prevailed there at the same time. Moreover, my predecessor here, Dr. Farquharson, M.P., had a similar, but not so extensive, epidemic of sore-throat during his tenure of office—between 1869 and 1871, an account of which he published at the time. But, it will be asked, why was it that it attacked three out of eight school boarding-houses, and those three were supplied by one milkman only? In reply to this question, I must prove first that it was very infectious indeed, and it spread with great rapidity. The epidemic occurred towards the close of the term, and several, although believed at the time to be free from infection, went home in an infectious state and infected their friends there. One case was most remarkable in showing its infection. Mr. C——, from a non-infected house, took his seat in the railway carriage to go home, and found there two schoolfellows from an infected house, who had the sore-throat; the consequence was Mr. C—— sickened with it at home and infected all the household there. Next, I must state that in all the three houses where we had the large number down there was a prior case of severe acute tonsillitis; and that so many were infected because we could not isolate the cases sufficiently, on account of their rapid falling, and because, in ordinary years, such catarrhal acute tonsillitis does not and will not spread as it did this season owing to atmospheric conditions, and so such necessary precautions to prevent an epidemic were not resorted to as they should have been and will be in future. Further, it will be asked, why did it keep to the three houses? It did not do so. Isolated case did occur, but later on, and they were strictly separated, and so it did not spread in them. Also, it did not spread easily to the other houses, because the symptoms, commencing acutely with a feeling of cold water down the back and stiff neck, made a boy either stay in house, or, if in form, return to his house at once, before he could infect. Again, it will be asked, how was it so many of the milkman's customers had the sore-throat? Simply because it prevailed all over the town, and had the town been canvassed instead of some of the milkman's customers only, I am sure this would have been found to be the case; although then it is possible that the excess might have been found among his customers, as they lived chiefly on the east side of the town. Even amongst my out-patients at the hospital I saw one or two cases not supplied with milk from this milkman, although I have seen none before or since. Moreover, one typical case occurred in a family which had their own cow, and there had been no possible source of infection that I could find after the minutest inquiry.

As my own family was supplied with the milk from this same milkman, and all had the sore-throat, let us analyse it there and see what happened. If it arose from milk-poisoning, who would get it first and worst? My children, who drink the pure milk, and plenty of it, and not the servants, who probably never taste any milk except in hot tea or cooked puddings. But what occurred? My cook, who answers the back door, which faces due east, had it first; she gave it to the housemaid; then the under-nurse, who goes in and out the kitchen, got it; then the nurse; and, last of all, the children. Would milk-poisoning behave like that? Again, at a friend's house supplied by the same milk a young lady and a servant both had it at the same time. The young lady never touched milk, and the servants probably only in tea and puddings. I must, therefore, still believe, contrary to my friend, that our epidemic was owing to atmospheric conditions alone; for this explanation carries a stronger weight of evidence, to my mind, than the milk theory.

Your obedient servant,

September, 1881. CLEMENT DUKES, M.D. Lond., Physician to Rugby School and Rugby Hospital.

"THE COMMITTEE OF THE SWANSEA HOSPITAL AND SEA-BATHING."

To the Editor of THE LANCET.

SIR,—It appears to me that the remarks contained in the annotation in THE LANCET of last week, under the above heading, are unjust to the Committee, and that if the present dispute were deprived of its personalities it would amount to very little. An intimate connexion with the infirmary and the hospital of seventeen years prompts me to state that the Committee have during that period treated the members of the medical and surgical staff with uniform courtesy and liberality; and that I have never known a reasonable request, having reference to the administration of the charity, refused; but, on the contrary, believing as they did that the technical knowledge possessed by medical men would be useful in their deliberations, within the last few years the Committee caused a rule to be made which gave the in-door officers (now eight in number) seats at the board. This, you will probably agree with me in thinking, was a great concession, and shows that our Committee are disposed to act liberally towards the profession.

The old infirmary, which was situated upon the beach, was opened in 1817, and was in fact a bathing-house, upon which a general infirmary was grafted. As time went on, its characteristics as a bathing establishment became less marked, while its position as an infirmary increased, until in 1869 the patients were removed to a large modern building, more centrally placed, with 100 beds, and was called the Hospital. Dr. Griffiths was appointed assistant-physician in 1863; and in consequence of an unsuccessful attempt to secure the physiciancy after the death of Dr. Thomas Williams, resigned his connexion with the infirmary in 1865. During the past year a new appointment of ophthalmic surgeon has been created, and Dr. Griffiths was elected to fill it; whereupon, having a seat at the board, he commenced to agitate for what he considered improvements, among which was the alteration of the statement printed upon the title-page of the rules—viz.: "The object of the institution being to afford medical and surgical relief, and warm and cold sea-water bathing, to the sick poor from every part of the kingdom." Up to this point several members of the staff agreed with Dr. Griffiths; but when the proposed alterations were brought before the Committee, and subsequently before the annual meeting, and were negatived, Dr. Griffiths' bearing towards the Committee became so offensive that those of his colleagues who had been disposed

to support him, feeling that the conduct of the Committee did not justify the form of attack adopted by him, and foreseeing that the hospital must necessarily suffer, fell away from him.

As to the utility of sea-water baths, I may be allowed to state that, judging from the results of their use at the old infirmary, I do not attach great value to them in the treatment of disease, but would rather see the new wing of the hospital filled with patients than know that a large sum of money was being spent in procuring impure sea-water from Swansea Bay. Yours obediently,

Swansea, Sept. 19th, 1881. G. MOWAT.

"TREATMENT OF THE INSANE IN PRIVATE HOUSES."

To the Editor of THE LANCET.

SIR,—It was not my wish to have addressed you so soon again on this subject, but I cannot allow Dr. Thomson's letter in your last issue to go unanswered. It is, however, to only one part of it that it is my intention to allude. Quoting, then, from his letter I find he writes: "Throughout the article and in the letters to the editor [one of which was my own], in the same number of THE LANCET, one great factor seems misunderstood, and it is this—viz., that the insane are not all suffering from acute mania; if so they might, as a rule, be treated at home just as for any other serious illness, and probably they are, for in this asylum of 500 patients we have not a dozen cases of acute mania admitted in the year."

Surely Dr. Thomson cannot mean to assert that acute maniacal patients are the only ones suitable for treatment in private dwellings. If so he very distinctly differs from some of the leading writers on insanity, for I find that Dr. Blandford, among others, states his conviction that cases of acute mania are perfectly unmanageable out of an asylum, and he does not believe that many of them could possibly be treated with a view to recovery in private houses. When such men as Dr. Crichton Browne, Dr. Lockhart Robertson, Dr. Maudsley, and Dr. Bucknill have so emphatically spoken in favour of the treatment of at least one-third of the certified lunatics of this country outside asylum walls, and have distinctly given it as their opinion that properly treated in private dwellings they would be happier and have greater chances of recovery than in asylum association, surely it requires a man to be very bold to come forward and assert that acute mania is the only form of insanity at all suitable for private dwellings.

There are many other points in Dr. Thomson's letter on which I should like to join issue with him, but I am hopeful that men of greater experience than myself will come forward and discuss this question on those common-sense principles which alone will admit of real benefit accruing to a large class of the unfortunate insane.

I remain, Sir, your obedient servant,

LIONEL A. WEATHERLY, M.D.

Portishead, Somerset, Sept. 1881.

GUNSHOT WOUND OF THE SKULL.

To the Editor of THE LANCET.

SIR,—The case of the late Capt. Elliot, Paymaster of H.M.'s 94th Regiment, is one that may interest some members of the profession, from the fact that injury to the skull of the peculiar character described hereafter is not alluded to by Erichsen, Holmes, Druitt, Taylor, or Ogston, as the result of a bullet wound not penetrating. To illustrate the case I have had the roof of the cranium photographed, and send you a copy. At first sight I hesitated to attribute the fracture to a bullet wound, but subsequent evidence left no doubt upon the subject. It will be within the recollection of your readers that Captains Elliot and Lambart were taken prisoners of war by the Boers, released on parole, and sent under an armed escort to cross the Vaal River, when the former ill-fated officer was shot in the river, and his companion, Captain Lambart, escaped by little short of a miracle, swimming across the river in the darkness of the night. After the war two Boers were tried for the crime of murder, and acquitted. The evidence produced showed that the two unfortunate officers had been fired upon with rifles soon after they had driven into the river. The remains of their cart, exhibited in court, gave testimony to bullets having been fired at it. Dr. Vowles, of the Orange Free State, gave evidence that he had examined the body of Capt. Elliot on the 5th January, 1881, the date of the murder being December 29th. He described a furrowed wound from right to left, crossing the forehead, causing a depressed fracture of the skull corresponding to that produced in court and represented in the accompanying engraving; also bullet wounds at right thigh and left wrist. On the 25th of June the skull was received in Pretoria and examined by Brigade-Surgeon Skeen and myself. It was bare of integument; the cavity contained a small quantity of decomposed brain substance and three pieces of bone. The largest portion consisted of the missing piece of the outer table and a much larger surface of the inner table; the other two pieces were from the inner table, of which together the three pieces measured about a square inch.

The hole in the outer table, in shape well exhibited in the accompanying engraving, situate about the middle of the frontal bone, measured about three-quarters of an inch in length, and was so narrow that it would only admit the passage of the smallest pistol bullet. From this fractures extended in different directions: two in the direction of the left orbit, two backwards to the left parietal bone, through which bone one extended two inches in length. Besides these there were three or four cracks around the hole and diverging from it, but no other injury at any point of the skull. Brigade-Surgeon Skeen and Surgeon-Major Cornerford, after the examination of the skull, were sent to Orange Free State and brought back the remains of the late Capt. Elliot, from an examination of which they were able to give evidence corroborating that of Dr. Vowles as to the nature of the wounds of the right thigh and left wrist.

I consider this case deserving of record in its medico-legal aspect, and if you regard it as such, trust that you will find a place for it in your columns.

I am, Sir, yours, &c.,

JOHN E. DYER, M.D., M.R.C.S., &c.,

Pretoria, Aug. 6th, 1881. District Surgeon, Pretoria.

MEDICAL MEN AND THE INCREASE OF HOSPITALS.

To the Editor of THE LANCET.

SIR,—In your issue, week by week, appear appeals for assistance to medical men who have fallen by the wayside in the struggle for existence, or for their widows and children when the stroke has been mortal; and side by side with those are notices of the enlargement of this or that

hospital, of the construction of new ones, and reports of so many thousand sufferers relieved by those institutions.

Now, Sir, is it possible there may be any connexion between these two sets of facts—the poverty of medical men on the one hand, the extension of medical charities on the other? Do they bear the relationship to one another of cause and effect? In the district in which I reside, and which may be taken as fairly representative, there are twenty-nine medical men whose names are in the Directory. There is an infirmary, supported by subscriptions, maintaining about seventy beds, with a staff of six honorary physicians and surgeons. From the annual report of last year, which now lies before me, I find that upwards of 4000 cases, including in-patients, out-patients, and accidents, were treated during the past twelve months. Now, if we suppose that this institution was not in existence these 4000 patients would have had to pay, directly or indirectly, for their medical attendance; and if we suppose that each of these cases was worth 10s. to a private attendant, which is not a high estimate, it would give a loss of £2000 to the twenty-nine medical men of the district, or, roughly, a loss of £70 annually to each, or, to put it in other words, each of the twenty-nine medical men loses upwards of £70 annually by the maintenance of the free medical advice of the institution. In the face of these constant appeals for assistance, with our own knowledge of the bravely borne pinch of poverty so many medical men patiently endure, I would ask you, in common justice to the profession at large, if we can afford to sacrifice so large a sum annually; or can the medical profession alone, of all other occupations, be expected to endure an extra tax upon its income, so large, enforced, and unrecognised. If it were not heartless it would be amusing to notice how in general medical men strain at the gnat and swallow the camel; how they chafe under irregular practitioners, quacks, and homœopaths, and swallow the honorary physician, who does them ten times the amount of harm, pecuniarily. Without wishing in any way to cast a slur upon any individual honorary medical officer, for the purpose of elucidating this view of medical charity it may not be unprofitable to look at what may be the motives which induce medical men to become candidates for honorary appointments, and I think these may be grouped under four heads. Those who honestly wish to do good to their fellow creatures; those who seek to gain superior skill or experience; those who hope by the connexion to get widely appreciated; those who desire to keep some one else out, or a mixture of the four. Whatever be the motive—benevolence, experience, so-called legitimate advertising, or jealousy—the object would appear to be the same, and that is to obtain superior fees and consulting practice. Now, it seems to me, there is but one remedy, and this, though severe in the first instance, would soon right itself. It is not to call in consultation medical men who hold an unpaid appointment.

Surely there are plenty of medical men who, from a long life in practice, possess the knowledge and experience for a medical opinion; and others who, in workhouses and other paid appointments, have gained the requisite skill for surgical operations, and who have never been a tax upon the medical community for the acquirement of their special knowledge, and who would be glad to give their opinion in a difficult case. Without the prospect of consulting practice it is scarcely likely men would be eager for unpaid appointments. Then it would be necessary that the charitably disposed should pay for medical advice and attendance, as well as the nursing and food of those they introduce to the institution. Able, ambitious, honourable men would seek hospital appointment for the salt it would provide them until fees began to come in, and though a pittance to those who calculate their income by four figures would be gladly welcomed by many a worthy and deserving man—men paid for their labour would feel bound to do their work, and do it well, with manifest advantage to the institution; whilst men being paid for their opinion, their opinion would be valued; and their position being recognised, we should hear little of the collision between the staff and their employers—the governors, as has been known to occur in even a metropolitan hospital. Nor does this suggestion require for its adoption any agitation or elaborate organisation. Let those who hold this view of unpaid officials recommend for a second opinion those only who do not hold an unpaid appointment. Perhaps, to a superficial observer, the man who pinches himself and wife, neglects his family and pecuniary engagements, but who passes as a benefactor to some charitable society, may be regarded as an example of heroic unselfishness; but to honest men, who look deeper than the surface, such a character must appear contemptible, and such conduct mean and silly. Does the unpaid medical officer hold such a position with regard to his professional brethren?

I am, Sir, your obedient servant,

September, 1881. VERITAS.

INHALERS FOR RELIEF OF HAY ASTHMA.

To the Editor of THE LANCET.

SIR,—In the article on Hay Asthma, published in THE LANCET of August 27th, Dr. Blackley, referring to a recent paper by myself on Hay Asthma in THE LANCET of July 16th, says, p. 371: "In supposing that Mr. Burroughs, of Snow-hill, is the inventor of the nasal respirators to which he refers, Dr. Thorowgood is labouring under a mistake; the invention is, if such it can be called, my own, and has, as I have stated above, been used in my experiments for some years." I find, on inquiry of Mr. Burroughs, that the small ring respirators, or permanent inhalers, were invented in Germany, the box containing them being marked C. Jehl, Strassburg. Mr. Burroughs further informs me that he has recently sent some of these permanent inhalers to Dr. Blackley, so that he will see in what respects they differ from his own invention.

I remain, Sir, yours &c.,

JOHN C. THOROWGOOD, M.D., F.R.C.P.

Welbeck-Street, W., Sept. 15th, 1881.

MIDWIFERY FORCEPS.

To the Editor of THE LANCET.

SIR,—In the opening address in Section VI. on Obstetric Medicine and Surgery, by Dr. A. H. M'Clintock, delivered before the International Medical Congress, I find the following assertion: "Nearly contemporary with Maubray was Dr. Edmund Chapman. He is entitled to our lasting gratitude for having been the first to publish to the world a description of that 'noble instrument' (to use his own phrase) the obstetric forceps, the secret of which the Chamberlens kept to themselves for fifty years. This he did in the 'Edinburgh Medical Essays,' and subsequently in his 'Treatise on the Improvement in Midwifery, chiefly with regard to the operation:' the operation meaning the application of the forceps. The first edition of the book came out in 1733." Now, while Dr. Chapman may have been the first to "publish to the world" the Chamberlen forceps, the authorities referred to by Dr. M'Clintock do not afford the proof of it. No contribution from Dr. Chapman on the forceps appears in the "Edinburgh Medical Essays" at all. The only article on the subject to be found is one by "Mr. Alexander Butter, surgeon in Edinburgh" (vol. iii., article xx., p. 295, of fifth edition, 1771), entitled "The Description of a Forceps for Extracting Children by the Head, when lodged low in the Pelvis of the Mother," in which he says "the forceps is scarce known in this country, though Mr. Chapman tells us it was long made use of by Dr. Chamberlane, who kept the form of it a secret, as Mr. Chapman also does." He then goes on to describe a forceps of "M. Duse, who practises midwifery at Paris," and appends a rough figure of the instrument. In article xxxi. of the same volume, giving an account of the improvements and discoveries in physic for 1733, we find (p. 358) a brief commentary on Chapman's treatise, referred to by Dr. M'Clintock, in which the reviewer says "he (Chapman) condemns the make of the extractors he has seen others employ, *but does not describe his own*," nor is there a word of allusion to any description of Chamberlen's forceps. Will Dr. M'Clintock reconcile these facts with his assertions, and

Oblige, yours respectfully,

West Fayette-st., Baltimore, Sept. 1881. JOHN R. QUINAN.

THE TECHNOLOGICAL SOCIETY.—This Society has been founded by the scientists and practical men of Peckham, to further the progress of science and afford facilities for the discussion of technical and scientific subjects, such as electricity, chemistry in its various branches and applications, botany, &c. On Friday, Sept. 30th, at eight o'clock, an introductory lecture will be delivered by Hugh Clements, F.S.Sc. and M.S.A., on the Arts and Sciences.

Obituary.

ROBERT SMITH, M.D. ABERDEEN.

THE following notice, extracted from the *Aberdeen Journal*, is from the pen of one who was in a favourable position for recognising the personal and professional merits of the deceased :—

"The announcement of the death of this promising young physician will have been read with deep regret by many connected with the university and city of Aberdeen, and the medical schools of London. As a student in arts and medicine, he made his way to the front by his native ability, and at the same time gained the respect of all by his manly and gentle nature. On his graduation in medicine in 1875, he was selected by Professor Struthers for appointment as demonstrator of anatomy in the university, a position in which he showed great ability as a teacher, and was a universal favourite. Electing to go into the practice of his profession, Dr. Smith thereafter filled the position of resident medical officer in the Leeds Public Dispensary, where he gained much experience in general practice, and then removed to Charing-cross Hospital, London, in the medical school of which he held the position of demonstrator of practical physiology, and was latterly appointed assistant-physician to the hospital. With his foot now firmly planted on the London ladder, his friends looked forward with confidence to a successful career for him as a physician in the great metropolis. His *alma mater*, at the same time, not forgetful of his former career within her walls, last year appointed him Examiner in Chemistry and Physiology, in the discharge of which delicate duty he showed the same qualities of conscientious firmness tempered with gentleness. It was with regret, approaching to dismay, that his many friends here heard the rumour last winter that a fatal illness had laid its hand on him, the result of a cold settling on a frame, it is to be feared, weakened by overwork. It was but too evident on the occasion of his last appearance as Examiner in Aberdeen, in July, that it would be his last. Still not losing hope, he had gone for autumnal rest with his relatives at Laurencekirk, where the end has overtaken him, even sooner than his medical friends anticipated. In the death of Dr. Smith the medical profession of London loses one of its most promising members, one whose qualities alike of head and heart (for his nature was a very pure and noble one) would have raised him to a great position—great in the best sense of the word. The untimely end of one so promising is very sad; but the name of Robert Smith will not soon be forgotten either in Aberdeen or in the school in which he laboured last."

CHARLES DUDLEY KINGSFORD, M.D.

A SCION of an old and well known Kentish family, Dr. Kingsford was educated at St. Paul's School and afterwards at Guy's Hospital. He was associated a short time in practice with Mr. William Hoar of Maidstone, and in 1854 was admitted a partner into the old established practice of Mr. Hovell, at Clapton, Middlesex. To a conscientious knowledge of his profession he added an earnest desire to do a large amount of work, and if he had been less anxious on this subject, he might not have been cut off at the comparatively early age of fifty-one. He is greatly regretted by a large circle of patients as a skilful medical attendant, a kind friend, and a pleasant social companion. He married in 1859 the eldest daughter of the late T. Oliver Goodchild, rector of Hackney, and leaves a large family. His eldest son is studying for the profession.

ST. JOHN AMBULANCE ASSOCIATION.—Classes have lately been held at Berwick-on-Tweed, by the St. John Ambulance Association, among the men of the 25th King's Own Borderers, the lecturer being Surgeon H. Crookshank, of the 24th M.R.V., who served with distinction during the Franco-German and Turco-Russian Wars. The examination was conducted by Surgeon-Major Gracey, M.D., of the Northumberland Artillery Militia, who made a highly favourable report to St. John's-gate, awarding certificates to Sergeant-Major R. Graham and forty non-commissioned officers and men. The Northumberland Artillery Militia also attended lectures, but their training terminated before the examination.

Medical News.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Sept. 15th :—

Taylor, Thomas, Gloucester-street, Regent's-park.

The following gentlemen also on the same day passed the Primary Professional Examination :—

Charles John Dabbs and E. Clunegias, London Hospital.

At the Preliminary Examination in Arts, held at the Hall on Sept. 16th and 17th, 152 candidates presented themselves, of whom 95 were rejected, and the following 57 passed and received certificates of proficiency in General Education :—

FIRST CLASS (in order of merit).—1st: Evelyn Oliver Ashe and William Henry Hillyer. 3rd: Edward William Mulligan. 4th: Charles Stancourt Ware.

SECOND CLASS (in alphabetical order).—H. G. L. Allford, J. E. Appleton, D. E. Ashbee, P. T. Beale, L. T. F. Bryett, W. J. Calvert, J. E. A. G. Becker, Wm. Robt. Cargill, J. W. Clegg, E. H. Corder, Guy Cory, Arthur Crapp, H. N. Edwards, C. Ewart, W. G. R. Farquharson, H. J. Fitzgerald, John Fitzgerald, Jas. R. Gaylard, W. H. Gatrell, K. C. Gimson, E. S. Gooddy, A. J. Gregory, E. J. Habbijan, L. Hamel-Smith, W. J. Harris, H. P. Helsham, J. P. Hocken, Frank Hues, T. W. Kelly, C. B. T. Langton, Cyprus Legg, Alfred Lloyd, A. Meyrick-Jones, F. J. Morgan, H. Nelson, S. W. Owen, C. J. Parson, C. T. Peach, J. Petherbridge, J. C. Rausch, J. G. Rusher, G. H. Seagrave, F. M. Sealy, G. Shillcock, J. H. Smyth, W. P. Southby, F. T. Troughton, Tamiz Uddin, Louis Valée, John Verco, William Wilson, Bernard D. Z. Wright, Percy Phillips Wright.

DR. BAIN is a candidate for the Lord Rectorship of the University of Aberdeen.

HOSPITAL FOR WOMEN AND CHILDREN, CORK.—A bazaar in aid of the funds of this establishment will be held on November 23rd and following day.

QUEEN'S UNIVERSITY IN IRELAND.—Examinations in the Faculty of Medicine commenced last Monday, and will terminate on the 29th inst.; and a meeting of the university to confer degrees will be held on October 13th.

DR. BODKIN of Chelmsford last week sustained a dislocation of the knee and a fractured leg by being thrown from his horse. We are glad to learn that progress towards recovery is satisfactory.

THE examinations in Sanitary Science by the University of Cambridge, open to all whose names are on the Medical Register of the United Kingdom, will begin on October 4th. The names of candidates must be sent to Professor Liveing, Cambridge, on or before the 28th instant.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES. Colonel Digweed, late of Ecchenswell, bequeathed £400 to the Hants County Hospital. Mr. David Mackintosh, late of Romford, bequeathed £200 to the London Hospital, £100 each to the City of London Hospital for Diseases of the Chest, the National Hospital for the Paralysed and Epileptic, and the Eastern Counties Asylum for Imbeciles and Idiots. Mr. James Marshall, formerly a merchant of Trinidad, bequeathed £500 each to the Royal Infirmary, the Eye Infirmary, and the Western Infirmary, all of Glasgow. St. Bartholomew's Hospital receives £500 under the will of the late Mr. W. N. Rudge of Draper's-gardens. Mrs. Adam Findlater has given £200 to Sir Patrick Dun's Hospital, Dublin. Catherine Teulon, late of Bandon, has bequeathed £50 to the Hospital for Protestant Incurables, Cork.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ANNINGSON, B., M.D.Cantab., M.R.C.S., has been reappointed Medical Officer of Health for the Cambridge Urban Sanitary District.

BARTON, J. A., M.R., C.M.Glas., has been appointed Medical Officer for the Parish of St. George, Bristol.

BERESFORD, C. W., M.R.C.S., has been appointed Medical Officer for the East Ilsley District of the Wantage Union.

BURD, G. N., L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer to the Second District and the Workhouse of the Okehampton Union.

CLEGG, W. T., L.R.C.P.Lond., M.R.C.S., has been appointed Senior Resident Surgeon to the North Stafford Infirmary, vice Russell, resigned

EVANS, E., M.B., C.M.Glas., has been reappointed Medical Officer of Health for the Anglesey United Sanitary District.

MACDONALD, J., M.D.Ed., has been appointed Medical Officer for the Parish of Walton, in the Chertsey Union.

MORISON, J., M.D., M.R.C.S., S.Sc.Cert.Camb., has been appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator to the First District of the St. Alban's Union, vice J. R. Hutchinson, resigned.

O'CONNOR, T., F.R.C.S.E., L.S.A.Lond., has been appointed Medical Officer of Health for the Cambridge Urban Sanitary District.

POLLARD, G. E., L.R.C.P.Ed., L.R.C.S.Ed., L.M., L.S.A.Lond., has been appointed Medical Officer of Health for the Baildon Urban District, Yorkshire, vice H. Walker, L.F.P.S.Glas., resigned.

POWELL, G. B., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Nottingham Union.

REDMOND, L., L.S.A.Lond., has been appointed Medical Officer at Port Harrison, Benin River, West Coast of Africa.

RIDGE, J. J., M.D.Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health to the Enfield Urban Sanitary Authority.

SHERRARD, H. R., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Fontmell District of the Shaftesbury Union.

STRAHAN, S. A. K., M.D., has been appointed Assistant Medical Officer to Northampton County Lunatic Asylum, Berrywood, vice J. T. Bowes, elected Resident Medical Superintendent to Wilts County Asylum.

WANKLYN, A. J., F.C.S., has been reappointed Public Analyst for the Borough of Buckingham.

WILLIAMSON, R. L., M.B., C.M., L.R.C.S.Ed., has been appointed Medical Officer for the Parish of Dairy, vice Milliman, deceased.

Births, Marriages, and Deaths.

BIRTHS.

ADCOCK.—On the 13th inst., at Great Yarmouth, the wife of John Adcock, M.D., Army Medical Department, of a daughter.

CROWFOOT.—On the 14th inst., at Beccles, Suffolk, the wife of W. M. Crowfoot, M.B., of a son.

O'CONNELL.—On the 17th inst., at Thornfield, Hastings, the wife of Surgeon-Major E. O'Connell, Army Medical Department, of a daughter.

WHITEHEAD.—On the 15th inst., at Belgrave House, Ventnor, the wife of John Livesay Whitehead, M.D., of a daughter.

MARRIAGES.

AITKEN—BOUCH.—On the 21st inst., at St. George's, Hanover-square, by the Hon. and Rev. E. Carr Glyn, assisted by the Rev. J. Wilson Pitkance, Lauchlan Aitken, M.D., of Rome, to Fanny, elder daughter of the late Sir Thomas Bouch, C.E.

JOHNSTON—PERCEVAL.—On the 31st ult., at Kilbeli Church, Dr. Percy Herbert Johnston, Army Medical Department, eldest son of J. W. Johnston, M.D., of Park View, Cork, late Surgeon-Major 85th King's Light Infantry, to Agnes Maude, eldest daughter of General J. Maxwell Perceval, C.B., Colonel 97th Regiment.

MACROBIN—JONES.—On the 14th inst., at the Parish Church of Clontarf, Surgeon-Major Macrobin, Army Medical Department, only son of the late Professor Macrobin, of Aberdeen University, to Annabella, widow of the late Charles Gray Jones, Esq., Captain R.N., and daughter of Henry A. Dillon, Esq., of Malahide, County Dublin.

SMITH—WHITWILL.—On the 13th inst., at Highbury Chapel, Bristol, Mary Catherine, eldest daughter of Mark Whitwill, J.P., of Redland House, to William Alexander Smith, M.A., M.B.Oxon., M.R.C.S., F.C.S., of Newport, Essex.

SYKES—REYNOLDS.—On the 14th inst., at St. Marylebone Parish Church, by the Rev. A. C. Eyre, M.A., John F. J. Sykes, B.Sc., M.B., of 7, Thayer-street, Manchester-square, second son of the late John Sykes, of Fitzroy-square, to Jeanie, only daughter of the late John Reynolds, of Dorset-gardens, Brighton.

TIBERGHIEN—LEMMENS.—On the 20th inst., at the Church in the Rue Belliard, Brussels, by the Rev. A. K. Horlock, Lucien, eldest son of Guillaume Tiberghien, of Rue de la Commune, Brussels, to Hélène Adelaide Eugénie Clemence, second daughter of Charles Lemmens, of Brussels.

DEATHS.

BARRY.—On the 15th inst., at Tunbridge Wells, John Milner Barry, M.D., F.R.C.P., second surviving son of the late John Milner Barry, M.D., of the City of Cork, aged 66.

INNES.—On the 14th inst., at Baveno, Lago Maggiore, from remittent fever, Lilian, the younger daughter of Surgeon-General J. H. Ker Innes, F.R.C.S., C.B., Honorary Surgeon to Her Majesty, aged 15 years.

—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Local papers containing reports or news-paragraphs should be marked.

We cannot prescribe, or recommend practitioners.

Lectures, original articles, and reports should be written on one side only of the paper.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

"PRISONERS IN BED."

UNDER this heading the newspapers have contained many sensational paragraphs during the last few days founded on the fact that at a certain union workhouse school a practice has been adopted of keeping refractory boys in bed. The old-fashioned punishment of sending children to bed when naughty has been revived at this workhouse, and practised injudiciously to an exceptional extent, one boy having been so confined for three weeks. This was undoubtedly a serious blunder. Such a period of bed-lying cannot fail to have done a healthy boy mischief; but it must be confessed those who have charge of large numbers of young people are placed in dire straits as to the carrying out of discipline. They must not resort to corporal punishment, to blows of any kind; they may not keep the lads on low diet, place them in confinement, or send them to bed for long periods. It is a pity some authority does not begin to say what *may* be done to make disobedient children docile. A discipline of kindness and a rule of love are scarcely practicable in the schools of workhouses. We are wholly opposed to the recourse to harsh measures, but it cannot be disguised that some form of punishment is necessary. Those who think punishment can be wholly dispensed with in the training of the young are either careless of the duty of chastisement or have no personal experience in the matter. It is time this subject was taken out of the region of sentiment, and discussed in a practical sense by persons who know the difficulties and necessities of the case. More good would result from such a discussion than from many columns of platitudes.

Dr. Purcell.—For the establishment of the objection, proof of non-residence would, we apprehend, have to be produced.

SWALLOWING A HALFPENNY: SOLID DIET TREATMENT.

To the Editor of THE LANCET.

SIR,—After reading the accounts of children having swallowed marbles and their safe removal by the solid diet plan of treatment, I am induced to forward to you for publication a similar case, which occurred in my practice, as a further proof of the efficacy of the above treatment in such cases. On Saturday evening, July 23rd, I was summoned in great haste to visit a little boy aged four years, who, I was informed, had swallowed a halfpenny. When I arrived the boy was in a somewhat frightened state of mind, and the parents in a great state of alarm at what had happened. Having examined him very carefully, and satisfied myself that the coin had actually reached the stomach, I pacified and calmed the parents by telling them that if they only carried out my instructions strictly everything would probably terminate favourably. They were not to administer any purgative whatever except what I would send. They were to let him have some dry biscuits, bread and butter, and also bread and sweet milk; very little liquid of any kind. On Sunday morning I visited my little patient, and found him running about and experiencing no ill effects from the coin which he had swallowed. I told the parents to adhere strictly to what I had recommended, which they did. On Monday I again saw him. He still continued playing about as usual. I again advised them to continue the diet. On Tuesday morning when I called I was told that he had had a good motion from the bowels, which I examined, and was much gratified to find the coin deeply imbedded in a mass of fæcal matter.

I am, Sir, yours faithfully,

WILLIAM THOMAS DINNEN.

Boston-street, Holyhead, North Wales,
August 3rd, 1881.

MANUFACTURE OF ALBUMEN IN RUSSIA.

THE *Oil and Drug News*, published in New York, says:—

"The manufacture of egg albumen in the neighbourhood of Moscow is carried on in the houses of the country people, who bring their product to the town in small quantities. Their albumen is generally roughly prepared and of bad appearance, and often spoils. But egg albumen is produced on a manufacturing scale in the neighbourhood of Korotscha, the largest establishment there numbering sixty to seventy workwomen, and has used eight millions of eggs. In the same place there are two smaller establishments, one employing twenty to thirty women, and treating about two and a half to three million eggs yearly. The yelks of the eggs are mostly exported to Germany, where they are used in the manufacture of gloves. Blood albumen, of good quality, is manufactured near St. Petersburg, in an establishment quite close to the central slaughter-house, so that the serum is obtained quite fresh, and is brought at once into the drying rooms. There are three large blood albumen works in Moscow, which are, however, situated at some distance from the slaughter-houses."

Surgeon-Major Smith.—In the present position of the question it was thought undesirable to publish the letter.

Mr. R. H. Read.—Krohne and Sesemann, 8, Duke-street, Manchester-square.

L. P. D.—Our correspondent will do wisely under the circumstances to enter at the Anderson's School of Medicine, Glasgow.

PROVIDENT DISPENSARIES.

To the Editor of THE LANCET.

SIR,—It would appear from THE LANCET correspondence that Mr. T. Holmes and others are not receiving the support of the profession which, in my humble though honest opinion, they deserve in their laudable endeavours to establish a system of health assurance. It is time for the deathblow to be aimed at the out-patient hospital system, which fails to reach the sick poor, which pauperises respectable people, and which—indirectly it may be—demoralises general medical practitioners. It is as important, in a sense, to have dispensaries in a large city as it is to have churches; and provident dispensaries, if properly managed, would confer a great blessing on the industrial classes. Though they may not, like the pseudo-philanthropic hospital dispensaries, act as stepping-stones to promotion of their medical officers, they should benefit those for whom they are intended, and be free from the charge of mock-treating any in quest of "better skill."

That provident dispensary medical officers are badly treated is, in much probability, due to their being too cheap; if there were less of the spirit of trade jealousy (I even dare to say), and more honourable etiquette among medical men, the conductors of benefit societies would soon learn to appreciate the work and care for the comfort of their medical officers. Perfection cannot be expected at first, but the work of the Provident Dispensary Committee is certainly a step in the right direction.

I am, Sir, yours, &c.,

Glasgow, August 30th, 1881. ROBERT WALLACE.

Assistant.—The matter is of too personal and limited a nature to justify the insertion of the letter.

Mr. Barron's (Southport) very interesting case of acute fibrinous bronchitis shall have early attention.

Antipodes had better apply at the office of the Crown Agents for the Colonies, Downing-street.

Mr. Gross (Leeds).—Messrs. Baillière, Tindall, and Cox, King William-street, Strand, will no doubt afford the information desired.

CALF LYMPH.

To the Editor of THE LANCET.

SIR,—In a letter to one of your contemporaries of August 27th I observe that the writer, Mr. P. N. Braidwood, has arranged with Dr. Martin, of Boston, for a weekly supply of animal vaccine from America, from three different stocks of original cow-pox, as cultivated by Dr. Martin.

I desire to acquaint the profession that these three different stocks of lymph are already cultivated in England, for, through the kindness of Dr. Cameron, M.P., I had the pleasure of meeting Dr. Martin when he was in London a few weeks ago, and of receiving from him practical instruction in the method of vaccinating animals and of taking and storing lymph from them, as practised by him in America for fully eleven years. Dr. Martin kindly presented Dr. Renner and myself with supplies of the three different stocks of animal lymph in his possession—viz., the Beaugency, the Ernecu (Belgian), and the Cobasset (a recent American source), and with those given me I successfully vaccinated a calf.

I am vaccinating calves every five or six days with each of the above-mentioned kinds of lymph, and also with the stock I have now used for nearly a year—the Utrecht,—so that the medical profession in England can have the vaccine fresh from the calf, without having to wait until it comes from America, at the lapse of about a fortnight from the time it is taken from the animal and received by them.

I am, Sir, yours faithfully,

Manningtree, Essex, August 31st, 1881. J. W. COOK, M.D.

ANTIQUITY OF THE VIEW THAT INEBRIETY IS A DISEASE.

IN several pamphlets upon intemperance recently issued from the American press it is contended that inebriety is not a vice but a disease, that this view is of recent origin, and that we owe it to the patient acuteness of our Transatlantic brethren. It may interest the curious among our readers to know that, even if true, this view is not new. Fourteen hundred years ago a like theory was propounded by St. John Chrysostom, who illustrated his meaning by a reference to the characteristic symptom of craving dyspepsia (dyspep. boulimique). "Do you not see that drunkards are always thirsty? For it is a passion, not the desire of nature, but some perverted disease. Do you not see how those who are affected with bulimy, as it is called, are always hungry?"—Library of The Fathers, vol. xiv., p. 467.

R. Young, M.D.—1. Popular treatises and lectures on public healt matters abound, but we cannot undertake to recommend any particular series. Wilson's "Handbook of Hygiene" (Churchill) would, perhaps, be best consulted by our correspondent.—2. Tyndall's syllabus of lectures on "Electricity and Magnetism" (Longman, Noad's "Students' Text-book of Electricity" (Lockwood and Co.), or Brooke's "Natural Philosophy" (Churchill's Manuals).—3. Seaton's "Handbook of Vaccination" (Macmillan and Co.).

Dr. Bacon, of the Cambridge Asylum, Fulbourn, has favoured us with a communication on "The Treatment of the Insane in Private Houses," which, on account of its intemperate tone, we must decline to print. If the question is to be discussed it must be in fair language and with calmness.

MEDICAL REGISTRATION.

To the Editor of THE LANCET.

SIR,—To be brief, my case is precisely similar to that of Mr. Paulley's, as recited by him in your issue of the 10th inst. I, as I can swear, have never received the circular since I left my last place of residence to come here. I, too, was refused lymph only last week, and this refusal leading to a second letter from the polite secretary to the establishment was my first notification that my name had been left out of the 1881 Register. Surely the least the committee of the General Medical Council can do is to notify by registered letter to surgeons not replying within six months to the circular, the fact that on and after such a date their names will be left off the list. Halfpenny circulars often miscarry—often are not forwarded when changes of address have occurred. The General Medical Council committee do not take sufficient trouble. In effect they say that is the surgeon's look out; he has paid his £5; if left off we get 5s. more for reinstating him as a legally qualified man. The Register is a nuisance to the surgeon constantly on the move; yet law says he may not dispense with it; if he does we will mulct him in 5s.

I am, Sir, yours truly,

F. ARNOLD LEES, M.R.C.S., L.R.C.P. Lond.

Leeds, Sept. 15th, 1881.

A Student (Manchester).—The authorities of the College of Surgeons have just issued the following notice, which will answer the inquiry: "The preliminary examinations of the College having now come to an end, all inquiries with respect to recognised preliminary examinations should be addressed to the Registrar of the General Medical Council, 315, Oxford-street."

St. George's.—Both the gentlemen mentioned are Serjeant Surgeons to the Queen; the office was instituted in 1461, when Maister William Hobbys was appointed with a salary of forty marks per annum. Formerly four fat bucks and as many fat does from the Royal parks were presented to the Royal College of Surgeons per annum. The number was subsequently reduced to half, and the custom ceased when Mr. Keate was president of the College.

TEMPERATURE OF SICK-ROOMS.

To the Editor of THE LANCET.

SIR,—You refer in your number of August 27th, p. 300, to the difficulty of lowering the temperature of sick-rooms, and suggest blocks of ice as affording the best means to effect this object.

A moment's reflection will remind one that these blocks are almost necessarily placed in the lowest, and therefore the coolest stratum of the atmosphere, and that the circulation around them is only such as is produced by the atmosphere itself. I exhibited at the late International Medical and Sanitary Exhibition a Chemical Punkah, which reduces the temperature most rapidly, and at the same time, if needed, destroys all infectious matters, and purifies effectually the most noxious atmosphere.

The punkah can be charged with simple iced water if its refrigerating powers alone are desired, and being hung in the highest, and therefore warmest, stratum of atmosphere, most perfect circulation takes place, and by its movements a large quantity of air is brought rapidly under the influence of the machine. If purified air be desired, then by adding caustic soda all organic particles are destroyed, together with all carbonic acid and sulphur gases. Practically it has fulfilled all that theory indicated.—I remain, Sir, respectfully yours,

South Hampstead, Aug. 1881. RICHARD NEALE, M.D. Lond.

STIMULANTS IN WORKHOUSES.

THE cost of the stimulants used in the Belfast Workhouse has recently exercised the attention of the guardians, and last week a resolution was adopted to the effect that as whisky and wine were given as medicine, the Local Government Board should be requested to have these stimulants included in the medical expenses in the return for the parliamentary grant. If acceded to, this arrangement would save a large sum to the ratepayers; but, if we mistake not, the question has been tried before without effect.

Dr. D. C. Black.—We conclude our correspondent does not wish us to publish his letter.

R. H.—One case of very gross fraud would scarcely justify any serious attack on the general accuracy of the directors.

Delta must be referred to our advertising columns.

A Member of the Medical Staff must attach his name to his communication if he wishes it to be inserted, and we would suggest that it might be couched in more courteous terms.

A CANDID CHEMIST.

LOUD have been the recent outcries among pharmaceutists on the increasing severity of the struggle for existence, and the practical application of certain inductions from the facts has been given in a paper by Mr. Barnard S. Proctor, the plain-speaking of which will probably excite some surprise. Since the paper has received the distinction of leaded type in the last number of the *Pharmaceutical Journal*, it may be assumed that the statements contained in it deserve consideration, and the following passages may interest our readers. Disjointed as they are, they are not more isolated than as they appear in the original paper:—

"Those who have more money than brains should go into trades requiring more capital than intellect—the dealing in patent medicines, druggists' sundries, &c.

"Those who have large heads and small purses should be engaged in pharmacy.

"The pharmacist is like a jackal. He catches prey which promises nice little pickings, but the omnivorous grocer, like a roaring lion, pounces upon the repast and devours prey, pickings, and jackal.

"The difficulty is, how is a druggist to find customers enough to keep himself fairly occupied in handing out the goods and taking in the money. It can only come about by a large reduction in the number of druggists.

"I long for the millennial happiness of the time when men will have the certainty of an income proportionate to their conscientious and intelligent performance of duty, without the savage struggle to cut the throats of their neighbours. It is not a pleasure to me to do a little murder, but I cannot rid myself of the conviction that life is like a battle of hungry rats.

"According to the laws of nature and the constitution of the world we must eat our neighbours or they will eat us. The best thing we can do is to eat them, with all the civility and politeness imaginable, and when we have finished our repast, express our thankfulness in the words of the unsophisticated cannibal who ate the missionary and said he was a very nice man.

"In Newcastle during the last six years we have eaten twenty-one chemists, no doubt many of them very nice men.

"When a pharmacist meets one of his fraternity in the street, the natural thought is, Which of us must go next? Which is beloved of his neighbours? He will next be reported a very nice man. If your neighbour does his business at such prices that he cannot live long you would like to hide his light under a bushel while it shines, and examine his ashes under the microscope when he is burnt out. But of the neighbour who drives his customers to your shop by his good prices, or any other means, you think, What a nice man he is! And when all is over, with philosophic resignation you contemplate the beautiful ruins of their pharmacies and say, 'What a happy medium I have been to have lived between two such neighbours.'

"At present, success in trade depends too much upon the valuable art of lying. I have no doubt any professor who could guarantee high proficiency in this art would meet with many pupils. Any man can grow strawberries and tell you they are very fine, but it is only a select few who know how to advertise them 'as large as hedgehogs and twice as sweet.'

"With pharmacists the times must be considered not only chronically, but essentially bad, so long as the number of pharmacists is twice as large as there is pharmaceutical employment for, and, as I said before, they do not like the low profit trade, it is unprofessional. They do not like open competition in packed sundries, where little girls at three shillings a week may drive them out of the market, and they are driven to the making of their own specialities which, if well backed up with the spirit of quackery, still afford them the chance of big profits, and for the sake of big profits the unprofessional character of the occupation is ignored. Rather than follow the example of the sick devil, they would undertake to cure the devil of his sickness for thirteenpence halfpenny.

"In conclusion, let me put the pith of my paper into the statement that he is a benefactor to his kind who can make one pharmacist grow where two grew before."

LUMINOUS PAINT.

THERE are obviously many uses to which luminous paint might be put in connexion with the nursing of the sick. For example, the labels on bottles of medicine which require especial care could be illuminated with this material, so that poisonous preparations for external use should not be administered internally by sleepy nurses in the semi-darkness of a sick chamber. It might also be employed to give a distinctive appearance to the bottles and wrappers of poisonous drugs generally in chemists' shops and in private houses. It is notorious that many of the mistakes made in dispensing occur at night, and it is then that patients are especially apt to be dosed with the wrong medicine. In the dispensing department of druggists' establishments, in the wards of hospitals, and in bedrooms generally, the use of this paint in the manner indicated would be convenient and useful; but that it may be so used it must be sold in small quantities and at a low price.

MENTAL EMOTIONS PRODUCING PHYSICAL RESULTS.

To the Editor of THE LANCET.

SIR,—The following cases appear to me of interest as illustrating the effect of mental emotions in producing physical results. Dr. Marchison mentions a case of jaundice arising from intense mental excitement.

An accident happened last year to a fast coach, and in conversation with the coachman he told me that some one gave a highly exaggerated account of it to his wife, which so alarmed her that, in his words, it changed her blood. I remarked I suppose she became jaundiced, which he told me was the case. Lately I came across the following:—"When Murat was reading an unsatisfactory letter on the retreat from Moscow, the impression which it made upon him was so violent that by degrees as he read it the bile mingled itself with his blood so rapidly that he was found a few minutes after in a state of complete jaundice."—*Vide* Napoleon's Expedition to Russia, by Ségur.

It would be of interest to know whether any of your numerous readers have met with any similar instances.—I am, Sir, yours faithfully,

Park-terrace, Selhurst-road, S.E., J. G. CARRUTHERS.
Sept. 1st, 1881.

Mr. John Bland.—The same object is now always attained by the use of Esmarch's elastic bandage.

Dr. Woods (Southport).—The paper is marked for insertion.

Mr. James Hardie (Wrenwood).—Next week, if possible.

In Doubt.—The medical man is bound to give the certificate required under penalty. His remedy is against the person who refused payment of his fee.

Bibliopole.—1. The museum and library of the College of Surgeons will reopen on Monday, October 3rd.—2. The first number of the first French newspaper was published in 1632, by Theophrastus Renaudot, a distinguished physician, under the patronage of Louis XIV. It was called the *Gazette de France*.

DISTRICT MEDICAL OFFICERS AS MEDICAL OFFICERS OF HEALTH.

To the Editor of THE LANCET.

SIR,—At page 426 of THE LANCET of Sept. 3rd you give an extract from the tenth annual report of the Local Government Board, reflecting on district medical officers and their being appointed as medical officers of health. In common justice and fairness I will ask you what these officers have left undone, what they ought to do, or what their libellers wish them to do? Are they not men highly qualified, as the law directs? They reside in their districts; they have local knowledge; they work continuously; they are like the working bees. They are unlike certain fine gentlemen who affect to do four or five hours' office work daily, pull down bundles of papers from well loaded shelves, look at them, affect to look grave, take up a newspaper, stretch, yawn, and appear tired and exhausted. Suppose these district medical officers were double, treble, their present number, and that Government took them into its pay and service, sent them their commands and countermands in military or semi-military fashion, what immense power for good it—the Government—could wield in every part of the three countries.

Asking for your opinion and advice on the foregoing, I am, Sir, yours obediently,

Sept. 6th, 1881. DISTRICT MEDICAL OFFICER AND OFFICER OF HEALTH.

*** We sympathise with our correspondent's protest, but he seems to have overlooked the reasons given by the Local Government Board for their decision—namely, experience of the working of the appointments. He appears, moreover, not to have observed that men so familiar with a medical officer of health's duties as Dr. Ballard and Dr. Parsons have in recent reports represented themselves as opposed to such appointments, and give evidence of their insufficiency. The real fact is that the Local Government Board has approved in no niggardly way of the appointments of district medical officers as medical officers of health in different parts of the kingdom, and now the Board reports that they have very generally been found wanting in the execution of the duties of a health officer. The district medical officers have, in fact, been given the chance, and lost it.—ED. L.

MEDICAL OFFICERS OF HEALTH AS SUPERINTENDENT REGISTRARS.

Medical Officer of Health.—In accordance with the Births, Deaths, and Marriages Registration Act, 6th and 7th William IV., c. 86, when registration districts and sub-districts were first formed it was enacted that the clerk to the guardians of each union, parish, or place could, if he thought fit, claim the appointment of superintendent registrar. It has been since ruled, however, notwithstanding some ambiguity in the working of the Act, that this right to claim only belonged to the person who was clerk to the guardians at the time of the first formation of the district. The guardians, it has been decided, in the case of a vacancy are forthwith to fill it up by appointing a person properly qualified, who need not be the clerk to the guardians.

COMMUNICATIONS, LETTERS, &c., have been received from—Professor Clay, Birmingham; Dr. Thomson, Camberwell; Dr. Denton, Steeple Claydon; Dr. Young, Newcastle; Surgeon-Major Smith; Dr. Gourley, West Hartlepool; Mr. Rushton Parker, Liverpool; Dr. T. Reichert, Philadelphia; Mr. Mowat, Swansea; Dr. Braxton Hicks, London; Dr. Bantock, London; Dr. Buzzard, London; Professor Bentley, London; Dr. Purcell, London; Dr. Mackintosh, Dublin; Dr. Bacon, Fulbourn; Dr. Bennett, Manchester; Dr. Campbell Black; Dr. Lees, Leeds; Mr. Lousley, Reading; Dr. Griffiths, Swansea; Mr. Southam, Manchester; Mr. J. Harpin, Barnstaple; Dr. Gillespie, London; Mr. Mahlsch, Leeds; Mr. O. Pemberton, Dalmally; Dr. Weatherly, Portishead; Mr. Hugh Clements, London; Dr. Maclagan, Melbury; Surgeon-Major Gribbon, Gosport; Dr. Cameron, London; Mr. Beach; The Secretary of State for the Colonies; Mr. Reginald Harrison, Liverpool; Dr. Macewen, Glasgow; Messrs. Burroughs and Wellcome; Mr. Brown, Westgate-on-Sea; Messrs. Deacon and Wilkins, Peterborough; Mr. Bayer, Clun; Mr. Batty, Dunblane; Mr. Wing, Bury St. Edmunds; Mr. Mullinar, Leamington; Mr. Collins, St. Columb; Dr. Power, London; Mr. Raine, Darlington; Mr. Gilkes, Hereford; Mr. Mannering, Stockwell; Messrs. Ingram and Sons, Hackney; Messrs. Capes and Co., Manchester; Messrs. Woolly and Co., Manchester; Mr. Burd, Oakhampton; Mr. Edwin Lee, Dewsbury; Dr. Anningson, Cambridge; Mr. Dingle, London; J. Jones, London; C. W. H., Tunstall; A. S. B.; Medicus, Saxmundham; S.; F. M. D., Hammersmith; Medicus, St. John's; L. P. D.; In Doubt; M.B., Lond.; Assistant; Devoniensis; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Lewis, Cefn Cellog; Dr. Duckett, Yarmouth; Mr. Tomson, Luton; Mr. Gill, Wavertree; Mr. Unsworth, Liverpool; Dr. Parkinson, Hitchin; Mr. Bisset, Newbury; Mr. Elton, Tipton; Mr. Townsend, Exeter; Dr. Talford, Barg; Mr. Nicholson, Hitchin; Dr. Smith, Irrawaddy; Dr. Claw, Pau; Dr. Cook, Manningtree; Mr. Garraway, Faversham; Mr. Jones, Plymouth, Pennsylvania; Dr. Crocker, London; Dr. Dance, Canning-town; Dr. Alderson, Hammersmith; Mr. Coates; Mr. Archer, Alnwick; Dr. Phillips, Halesowen; Mr. Owen, Coventry; Mr. Evans, Lambley; Mr. Coker, Horncastle; Mr. Thompson, Tenbury; W. M.; Rectus; A. H. S., Charton; A. Z., Lewes; M.R.C.P.; X. Y. L.; S., Dudley; A. Z., Manchester; Metropolitan Dispensary; Y. G. C.; Alpha, Brixton; J. J., Aberystwith; G. S.; M.R.C.S., Denmark-hill; V. A., Manchester; G. Y. B.; Chirurgus; Doctor, Staplehurst; Crux; O. S.; J. J. R., Oswald Kirk; Registrar, Bath; Student, Manchester; R. C. H., Oldham; Zero; X. F. R., Swadlincote; Principal, Seaford; M.P.; Mater, Barnes; E. A. B., Clun; A. M. Z., London; C. G. C. S., Maidstone; Secretary; R. W.; G. R. S., Maidenhead; X. Y. Z., Alfreton; A. N., Sheffield; H. H., Newbury; &c., &c.

North Devon Journal, Sanitary Engineer, Hackney and Kingsland Gazette, Reading Mercury, Revista Frenopatica Barcelonesa, South Durham Mercury, Birmingham Daily Post, Funny Folks, The American, South Wales News, The Cambrian, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Sept. 22nd, 1881.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sept. 16	30·12	W.	49	47	67	62	47	..	Foggy
,, 17	30·04	N.	56	55	97	69	55	..	Foggy
,, 18	29·82	W.	63	59	96	74	59	·08	Cloudy
,, 19	29·80	W.	63	60	94	69	60	·02	Overcast
,, 20	29·84	S.	62	57	93	70	57	..	Fine
,, 21	29·45	S.	63	60	..	62	60	·26	Overcast
,, 22	29·59	W.	54	51	..	59	49	..	Cloudy

Medical Diary for the ensuing Week.

Monday, Sept. 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
UNIVERSITY COLLEGE HOSPITAL.—Ophthalmic Department.—2 P.M., and on Tuesday, Thursday, and Friday, at the same hour.

Tuesday, Sept. 27.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Sept. 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.—Skin Department.—1.45 P.M., and on Saturday at 9.15 A.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, Sept. 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, Sept. 30.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 1.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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